SHARP®

LASER PRINTER

Operation manual

(for printer operation and general information)

Be sure to become thoroughly familiar with this manual to gain the maximum benefit from the product.

Before installing this product, be sure to read the installation requirements and cautions sections.

Be sure to keep all operation manuals handy for reference including this manual, the "Operation manual for printer operation and general information" and operation manuals for any optional equipment which has been installed.

Warranty

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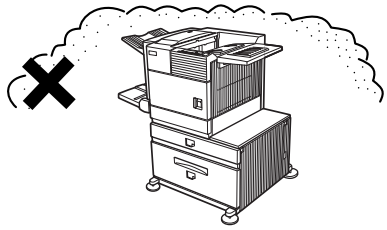
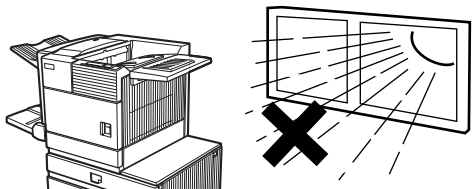
INSTALLATION REQUIREMENTS

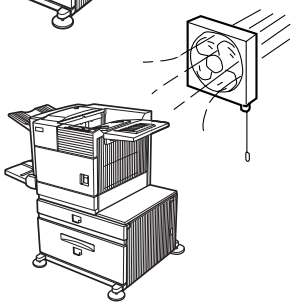
Improper installation may damage this product. Please note the following during initial installation and whenever the machine is moved.

1. The machine should be installed near an accessible power outlet for easy connection.

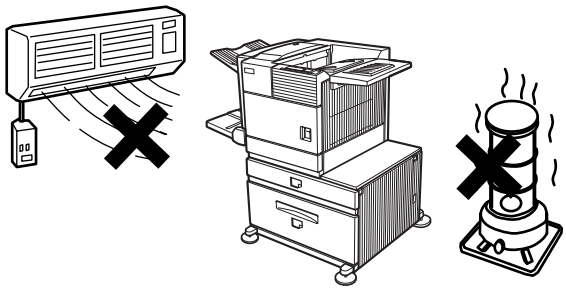


2. Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.
   - For the power supply requirements, see the name plate of the main unit.

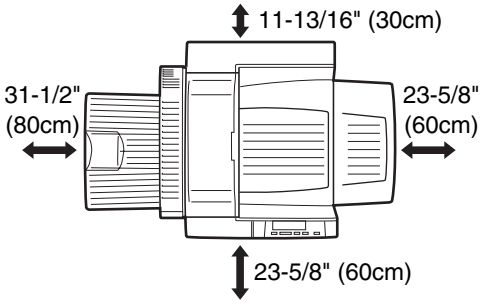




3. Do not install your machine in areas that are:
   - damp, humid, or very dusty
   - exposed to direct sunlight
   - poorly ventilated
   - subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.



4. Be sure to allow the required space around the machine for servicing and proper ventilation.



A small amount of ozone is produced within the printer during operation. The emission level is insufficient to cause any health hazard.

NOTE:
The present recommended long term exposure limit for ozone is 0.1 ppm (0.2 mg/m^3) calculated as an 8 hr. time-weighted average concentration.
However, since the small amount that is emitted may have an objectionable odor, it is advisable to place the copier in a ventilated area.

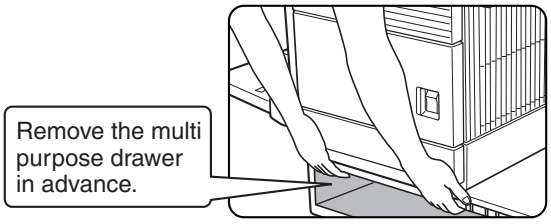
Moving this machine

Lift this machine at the positions shown in the illustration below and carry it horizontally.

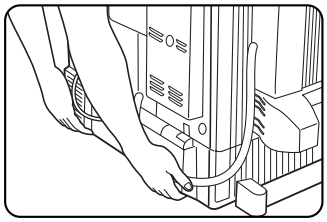
CAUTION
Two people are required to lift and carry this machine.
The center of gravity of the machine is slightly to the left of the center of the machine when viewed from the front. If a duplex module is installed the center of gravity will be even further shifted to the left. When lifting the machine be careful to steady it to prevent it from toppling. Also be sure that all covers and the duplex module are securely closed and latched before lifting.
If a duplex module is installed, do not lift the machine by the module as it may come off causing it and the machine to drop.

Remove the multi purpose drawer and lift at the positions shown in the illustration.
For removal and installation of the multi purpose drawer, see page 4-4. To avoid injury be sure to completely remove the multi purpose drawer.

Front side

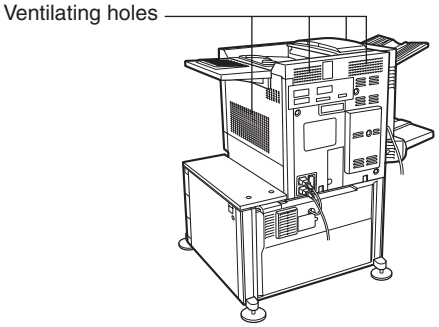


Rear side



If the machine has been placed on a stand/paper drawer:
The stand/paper drawer is equipped with casters for moving. Unlock the adjusters of the stand/paper drawer and gently move the machine taking care to steady it to prevent it from toppling.
For locking and unlocking the adjusters, see page 0-3.

CAUTIONS
- The center of gravity of this machine is a little deviated to the left from the center. If the machine is not equipped with a multi purpose drawer or a stand/paper drawer, take care in opening the left side cover (or the duplex module) not to cause toppling of the machine.
- Do not cover the ventilating holes of this machine. Do not install this machine in a location where these holes are covered. If these holes are covered, heat will not be dissipated and a fire may be caused.



CAUTIONS

1. Do not touch the photoconductive drum. Scratches or smudges on the drum will cause dirty prints.

2. The fusing unit is extremely hot. Exercise care in this area.

3. Do not look directly at the light source of the scanner module. Doing so may damage your eyes.

4. Five adjusters are provided on all optional stand/ paper drawer units. These adjusters should be lowered until they contact the floor.

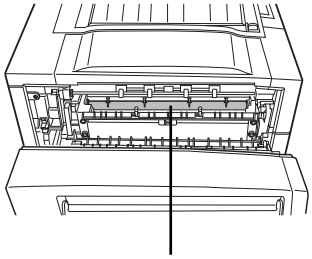
5. Do not make any modifications to this machine. Doing so may result in personal injury or damage to the machine.

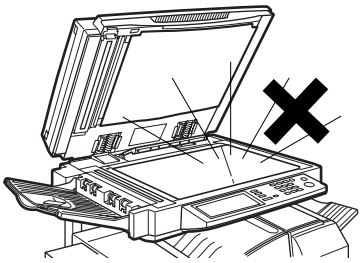
6. Since this machine is heavy, it is recommended that it be moved by more than one person to prevent injury.

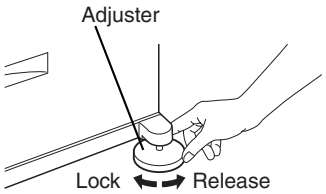
7. When connecting this machine to a computer, be sure to first turn both the computer and the machine off.

8. Do not print anything which is prohibited from printing by law. The following items are normally prohibited from printing by national law. Other items may be prohibited by local law.
   - Money
   - Stamps
   - Bonds
   - Stocks
   - Bank drafts
   - Checks
   - Passports
   - Driver's licenses

9. Do not throw toner or a toner cartridge into fire. Toner may be spattered, causing a burn.







Cautions on laser

Wave length	785 nm $^{+10\ nm}_{-15\ nm}$
Pulse times	North America: 35 cpm model: (4.1 μs ± 4.1 ns)/7 mm 45 cpm model: (5.7 μs ± 5.7 ns)/7 mm Europe: 31 cpm model: (3.8 μs ± 3.8 ns)/7 mm 35 cpm model: (3.8 μs ± 3.8 ns)/7 mm 45 cpm model: (4.4 μs ± 4.4 ns)/7 mm
Output power	0.2 mW - 0.4 mW

At the production line, the output power of the scanner unit is adjusted to 0.4 MILLIWATT PLUS 8 % and is maintained constant by the operation of the Automatic Power Control (APC).

Caution
This product contains a low power laser device. To ensure safety do not remove any cover or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

For North America:

SAFETY PRECAUTIONS

This Digital Equipment is rated Class 1 and complies with 21 CFR 1040.10 and 1040.11 of the CDRH standards. This means that the equipment does not produce hazardous laser radiation. For your safety, observe the precautions below.

- Do not remove the cabinet, operation panel or any other covers.
- The equipment's exterior covers contain several safety interlock switches. Do not bypass any safety interlock by inserting wedges or other items into switch slots.

Caution
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

For Europe:

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

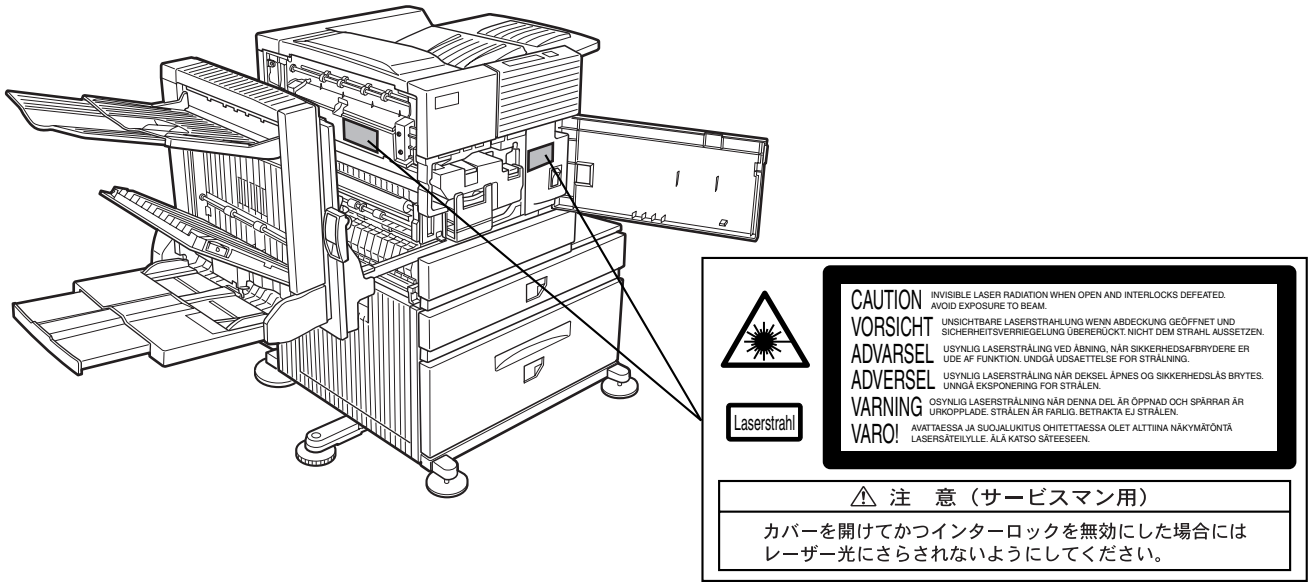
CAUTION
INVISIBLE LASER RADIATION WHEN OPEN INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

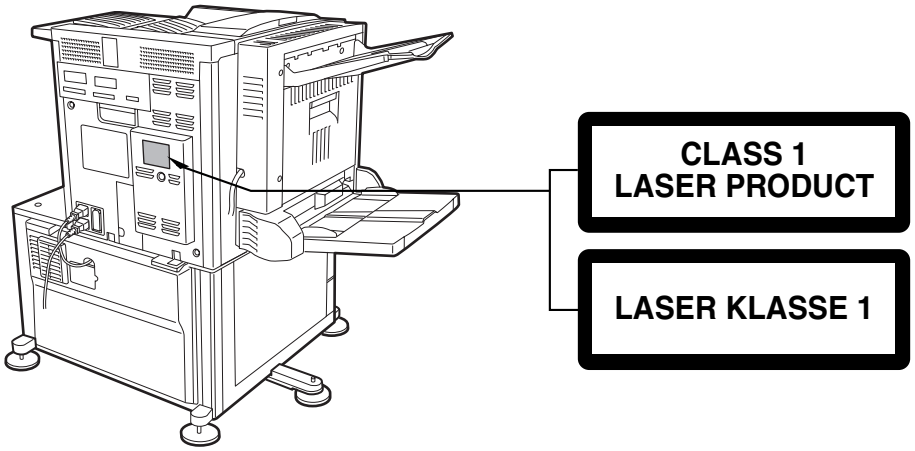
VORSICHT
UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

ADVARSEL
USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

VAROITUS!
LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING
OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.



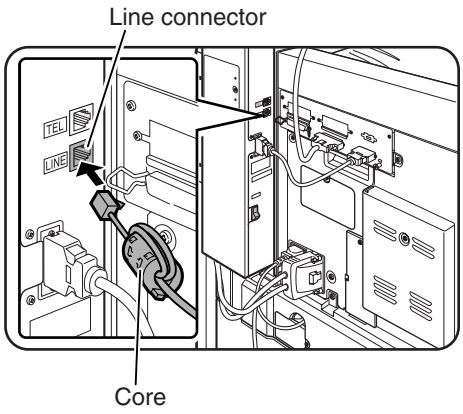


FACSIMILE FEATURE

To extend the capabilities of this product to include facsimile functions, an optional facsimile expansion kit must be installed. Refer to the facsimile operation manual for details on using the facsimile features.

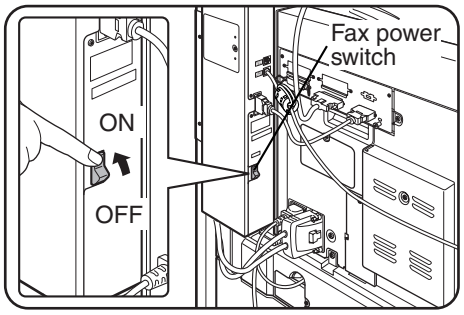
■ Line connection

Use the telephone cable supplied with the facsimile expansion kit to connect the machine to a telephone line. Connect the cable so that the connector nearest to the noise suppression core is inserted into the socket located of the expansion kit box. Insert the other end into the telephone line socket.



■ Fax power switch

For the facsimile features to function, the power switch located on the expansion kit box must be turned on.



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CHAPTER 1

BEFORE USING THE PRODUCT

This chapter describes basic information that should be read before using this product.

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INTRODUCTION

To gain the maximum benefits in using this product, it is recommended that the user read this manual to become familiar with all the features and functions of the basic product and the precautionary information contained in the manual.

NOTE
In this manual, American spellings are used.

This product is a high speed laser printer that can be extended to become multifunctional through the installation of optional peripheral devices. The product can be extended to include copier, network scanning, facsimile or network printing capabilities. This manual describes the basic use of the product as a printer and does not contain use information for any of the optional peripheral devices. Separate operation manuals are included with each of the optional peripheral devices. Refer to these manuals for their operation.

Original and paper sizes

This machine allows use of standard sizes in both the inch and AB systems.
The standard sizes available in this machine are shown below.

Sizes in the inch system		Sizes in the AB system
When the machine is being operated from the operation panel on the main unit:	When the machine is being operated from the touch panel on a scanner module:	
LEDGER	11 x 17	A3
LEGAL	8-1/2 x 14	B4
FOOLSCAP	8-1/2 x 13	A4
LETTER	8-1/2 x 11	B5
EXECUTIVE	7-1/4 x 10-1/2	A5
INVOICE	5-1/2 x 8-1/2	

In this manual, the indications for the scanner module touch panel as shown in the table above are used.

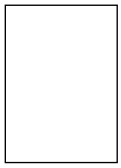
The meaning of “R” in original and paper size indications

Some original and paper sizes can be placed in either the portrait or landscape orientations. To differentiate between landscape and portrait, the landscape orientation size indication will contain an “R”. These are indicated as 8-1/2 x 11R, 5-1/2 x 8-1/2R, A4R, B5R, etc. Sizes that can be placed only in the landscape orientation (11 x 17, 8-1/2 x 14, 8-1/2 x 13, A3, B4) do not contain the “R” in their size indication.

Size indication with “R”

Landscape orientation

Size indication without “R”



Portrait orientation

MAIN FEATURES

Laser printer able to accept a range of peripherals allowing it to be configured to specific needs

This product is a laser printer that can be used as a local printer which can be configured by the addition of peripheral devices to extend its capabilities to include copier, network printer, network scanner or facsimile features.

A range of optional units to enhance productivity

Optional additions such as duplex units for producing two-sided output, additional paper feed units to increase the variety of available paper sizes and paper capacity, paper output units to sort and otherwise organize the output and a scanner module for automatically scanning documents.

600 dpi high resolution printing

High-definition and high quality printing with 600 dpi resolution can be performed. Also high image quality equivalent to 1200 dpi can be output by using a smoothing function.

High speed monochrome printing

Depending upon the model chosen, high speed printing at 35 letter (A4) size pages/minute or 45 letter (A4) size pages/minute is available.

PostScript compatible

Installation of a PS3 expansion kit gives PostScript compatibility (PostScript level 3).

Energy saving features

This product has the following two power reducing modes that conform to the Energy Star guidelines which help to conserve natural resources and reduce environmental pollution.

Preheat mode

The preheat mode is the first level of power reduction. The power is reduced to the fuser unit a preset time after the machine has completed a job and no further machine operations have been made. The machine can recover to the ready condition within a short period of time. The preset time to enter the mode can be set by a key operator program.

Auto power shut-off mode

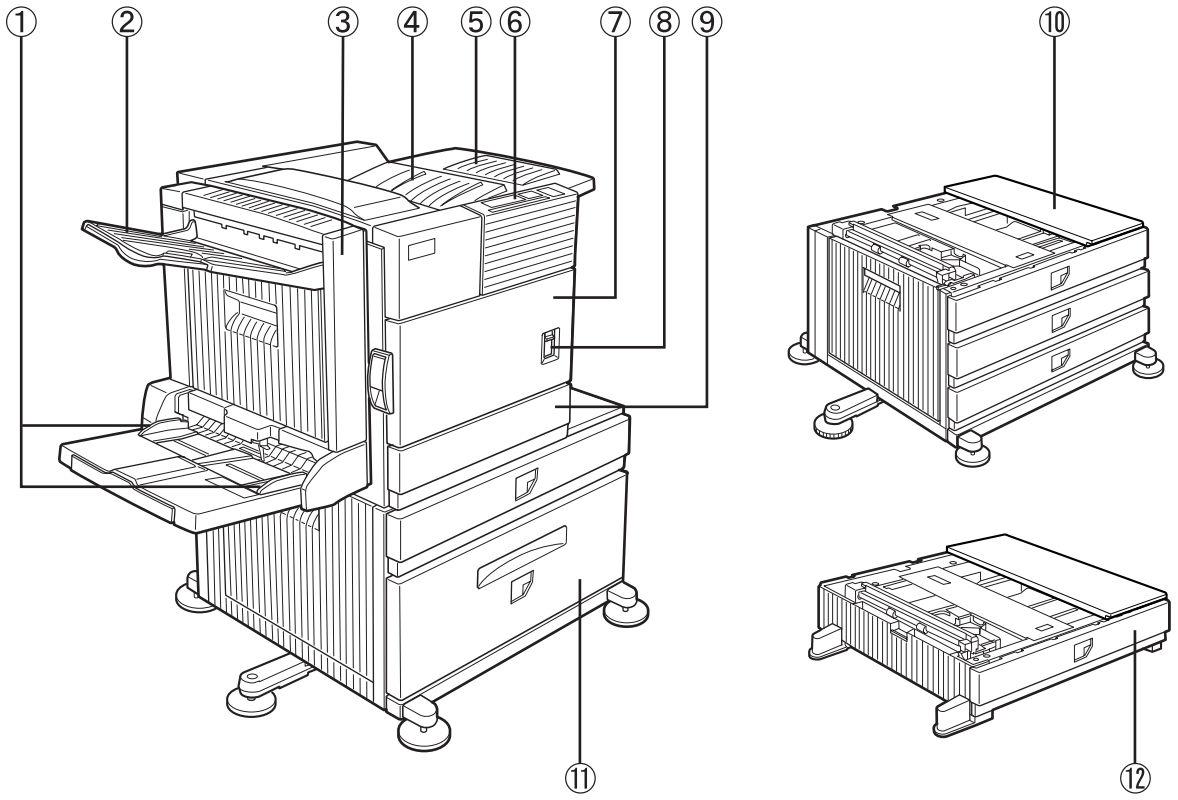
The auto power shut-off mode is the second level of power reduction. In this mode power is shut off to the fusing unit and the touch panel. In this state more energy is saved than in the preheat mode but the time to recover to the ready condition will be longer. The preset time to enter this mode can be set by a key operator program.

As an ENERGY STAR® Partner, SHARP has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

When this product is used as a printer, and either of the above modes is active, the mode will be deactivated automatically by an incoming job and the machine will automatically warm up and start to print when it has reached the ready temperature.
When this product is configured for multi-function operation, and either of the above modes is active, the mode will be deactivated as above by either an incoming print job or received facsimile data. Either mode will also be deactivated by any key operation on the operation panel or by the action of an original being placed for copying or facsimile transmission.

PART NAMES AND FUNCTIONS

Exterior



① **Bypass tray paper guide**

② **Exit tray***

③ **Duplex module/bypass tray***
Module for two-sided printing

④ **Upper paper output area**
Finished sheets are deposited here.

⑤ **Upper exit tray extension***
Provides support for large size paper.

⑥ **Operation panel** (See page 1-9.)

⑦ **Front cover**
Open to add toner .

⑧ **Main switch**
Press to turn power on and off.

⑨ **Paper tray 1**

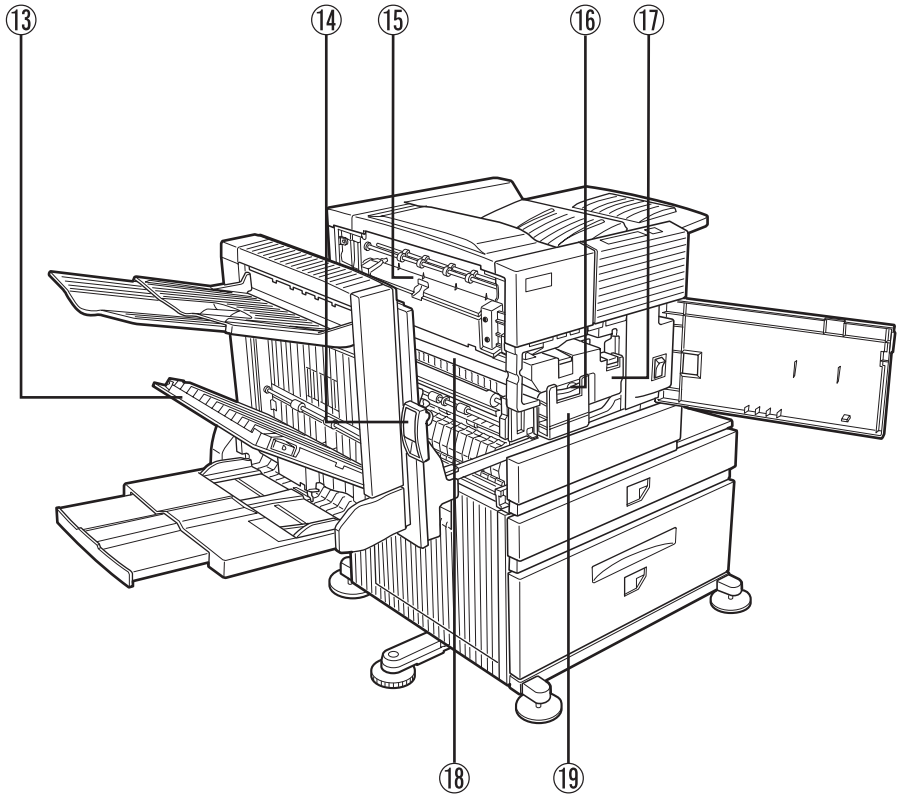
⑩ **Stand/3 x 500 sheet paper drawer*** (See page 1-23.)

⑪ **Stand/MPD & 2000 sheet paper drawer*** (See page 1-24.)

⑫ **Multi purpose drawer*** (See page 1-21.)

* ②, ③, ⑤, ⑩, ⑪, and ⑫ are peripheral devices. For description of these devices, see page 1-7. One of devices ⑩, ⑪, and ⑫ must be installed. If you install ⑩ or ⑪, a power supply unit (page 1-8) must also be installed.

Interior



⑬ **Duplex module side cover**
Open when a misfeed has occurred in the duplex module.

⑭ **Side cover latch**
Push up to open the side cover when a misfeed has occurred in the main unit.

⑮ **Fusing unit**
Lift up to open the side cover when a misfeed has occurred in the main unit.

CAUTION
The fusing unit is hot. Take care in removing misfed paper.

⑯ **Developer cartridge***
This cartridge contains developer and must be removed and replaced by a new cartridge when indicated on the operation panel.

⑰ **Toner cartridge (drum/toner cartridge)***
The toner cartridge must be replaced when indicated on the operation panel.

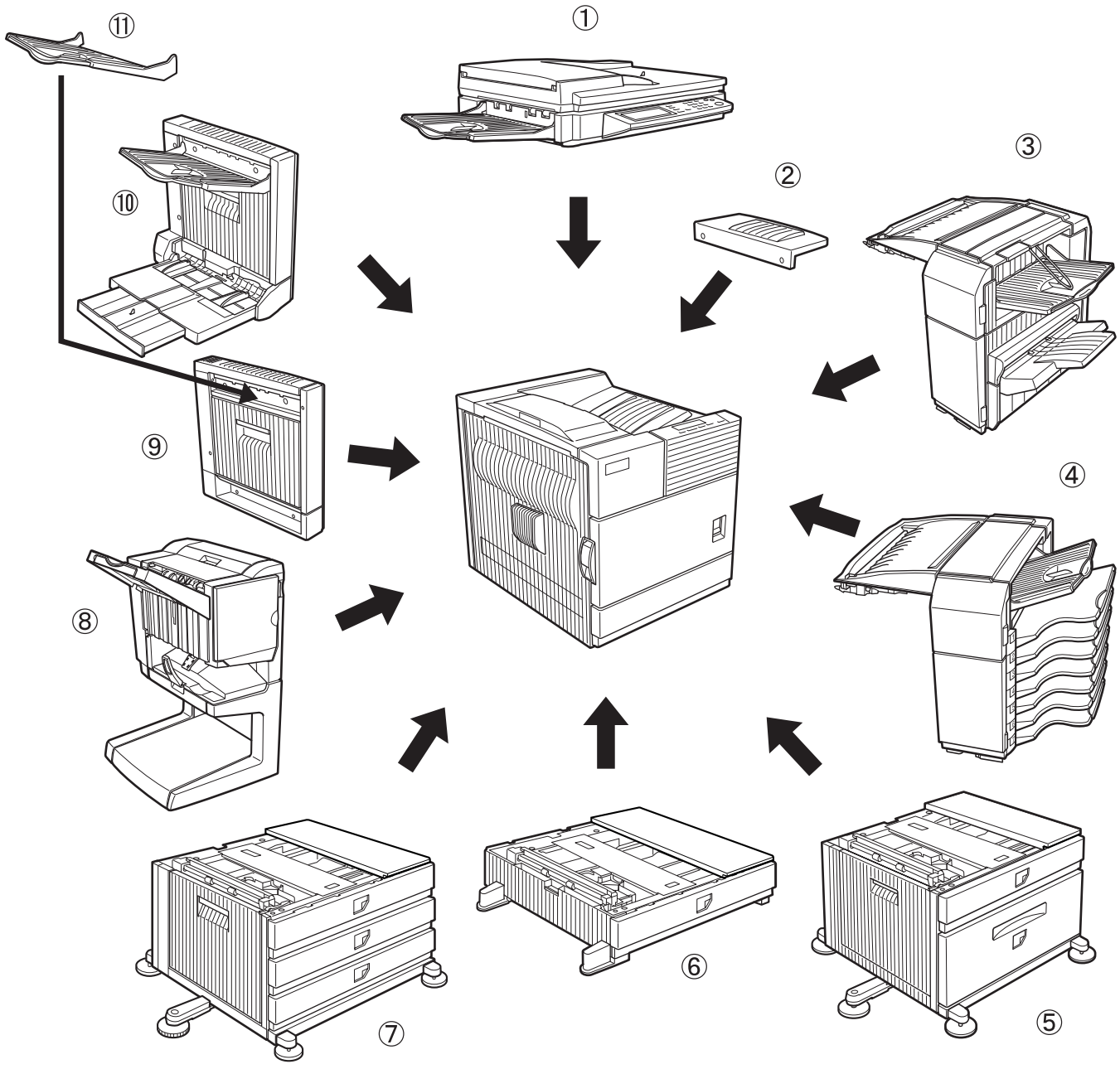
⑱ **Photoconductive drum**
Images are formed on the photoconductive drum.

NOTE
Do not touch or damage the photoconductive drum.

⑲ **Cartridge lock lever**
When replacing the drum, toner or developer cartridge, turn down this lever and pull it out.

* For replacement and installation of cartridges, refer to the Operation Manual (Read this document before installing the product.).

Part names and functions of peripheral devices



① **B/W scanner module/DSPF (AR-EF1)**
The B/W scanner module/DSPF is a monochrome scanner that uses two scanning modes. In one mode, sheet originals are fed and scanned by the action of the moving originals. In this mode either one side of an original can be scanned or both sides of an original can be scanned at the same time. The other mode of scanning uses a moving mirror for scanning originals placed on the glass platen.

② **Upper exit tray extension (AR-TE4)**
Mount this unit to the upper paper exit tray. This extension is needed to support large size paper.

③ **Finisher (AR-FN6)**
Output sheets can either be sorted in page order or grouped by page. Sorted sets or groups are offset stacked for easy separation when removed. Sorted sets can be delivered either stapled or unstapled.

④ **Mail-bin stacker (AR-MS1)**
This unit is an output sorter that has seven receiving bins.
The bin to receive printed output can be selected in the printer driver. Each bin can be assigned to receive printed output by an individual person or by groups of people so that their prints are separated from other users making them easy to retrieve.
When this unit is installed, any copies or facsimile prints will be sent to the top tray and not into the mail bins.

⑤ **Stand/MPD & 2000 sheet paper drawer (AR-D13)**
This paper feed unit contains an upper multi-purpose drawer (see item ⑥) and a lower drawer which can hold a maximum of 2000 sheets of 20 lbs. (80 g/m^2) paper.

⑥ **Multi purpose drawer (AR-MU1)**
Up to 500 sheets of 20 lbs. (80 g/m^2) paper can be loaded. Also special papers such as envelopes (standard sizes only) and postcards can be set.

⑦ **Stand/3 x 500 sheet paper drawer (AR-D14)**
This paper feed unit contains an upper multi-purpose drawer (see item ⑥) and two lower drawers each of which can hold a maximum of 500 sheets of 20 lbs. (80 g/m^2) paper.

⑧ **Saddle stitch finisher (AR-FN7)**
The saddle stitch finisher can automatically place two staples for centerline binding of prints or copies and fold them along the centerline.
An optional hole punching unit is available for installation into the finisher.

⑨ **Duplex module (AR-DU3)**
An optional duplex module must be installed for automatic two-sided printing.

⑩ **Duplex module/bypass tray (AR-DU4)**
This module is basically the same as ⑨ above with the addition of a manual bypass paper feed unit.

⑪ **Exit tray (AR-TE3)**
Mounted to the paper output port of a duplex module.

Some peripheral devices cannot be installed together while others may require the installation of one or more others to be functional. See page 7-4, “LIST OF COMBINATION OF PERIPHERAL DEVICES.”
Peripheral devices are basically optional, but some are provided as standard equipment for some models.

■ Other optional equipment

- **Scanner rack (AR-RK1)**
  This rack is required to support the scanner module above the printer.

- **Power supply unit (AR-DC1)**
  Some peripheral devices require the installation of this power supply.

- **Print server card (AR-NC5J)**
  A NIC (network interface card) is necessary for connecting the printer to a network.

- **Multi-function controller board (AR-M11)**
  This print controller is necessary to provide copier, facsimile and network scanning capabilities.

- **PS3 expansion kit (AR-PK1)**
  This kit provides compatibility of PostScript level 3 to the printer.

- **Hard disk drive (AR-HD3)**
  Extends the image storing capacity for the printer and copier features. This unit is required for the job retention function (see page 2-9) to operate.

- **Facsimile expansion kit (AR-FX5)**
  This kit is required to add facsimile features.

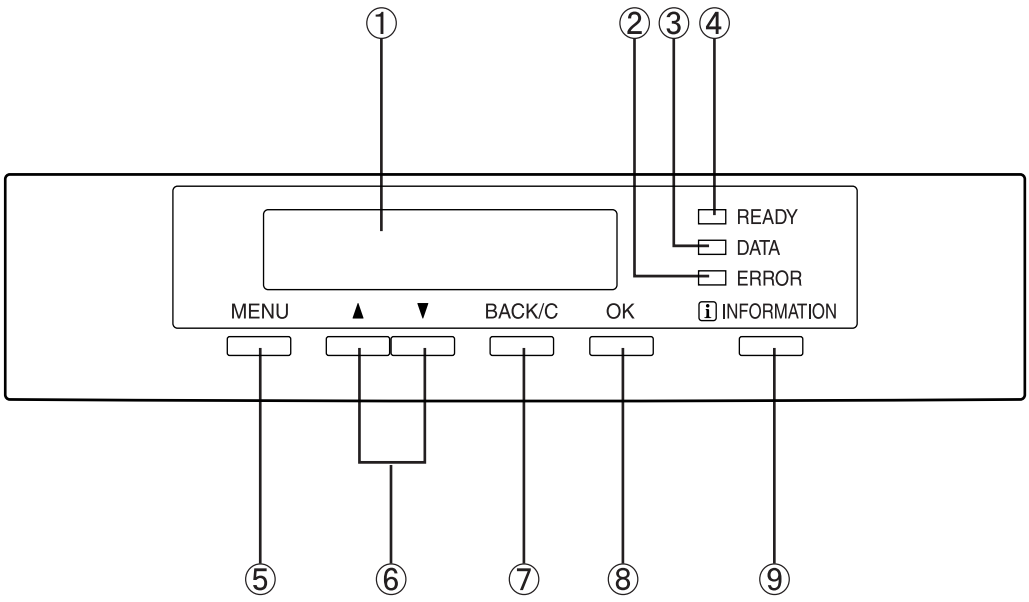
- **Additional fax memory (8 MB) (AR-MM9)**

- **Network scanner expansion kit (AR-NS2)**
  This kit is required to add the network scanning feature.

- **Printer kit (AR-P14)**
  The Printer Kit is required to upgrade a product whose model name contains suffix "U" (ex. AR-M280U) to network printer. To use such model as network printer, the Printer Kit and Printer Server Card (AR-NC5J) are required.

Operation panel of the main unit

The display and indicators show the current status of the printer. All printer settings are made by using the keys and display panel.



① **Message display**
Displays the current status of the printer.
[i] displayed in any message indicates that the [INFORMATION] key should be pressed.

② **[ERROR] indicator**
Lights up when paper or toner must be added or when a misfeed has occurred in the machine. Blinks when an abnormal condition has occurred in the machine.

③ **[DATA] indicator**
Lights up or blinks when print data is being received or output. Also lights up when job data is stored by the job retention function (page 2-9).

④ **[READY] indicator**
Print data can be received when this indicator is lit.

⑤ **[MENU] key**
Press to select a menu group such as printer configuration menu (page 3-2), custom settings (page 3-6) or execution of print jobs held by the retention function (page 2-9). Also, press to return to the job status screen from the setting screen of each job status group.

⑥ **[▲/▼] keys**
Press to select menu or function items or to set numerical values for those items.

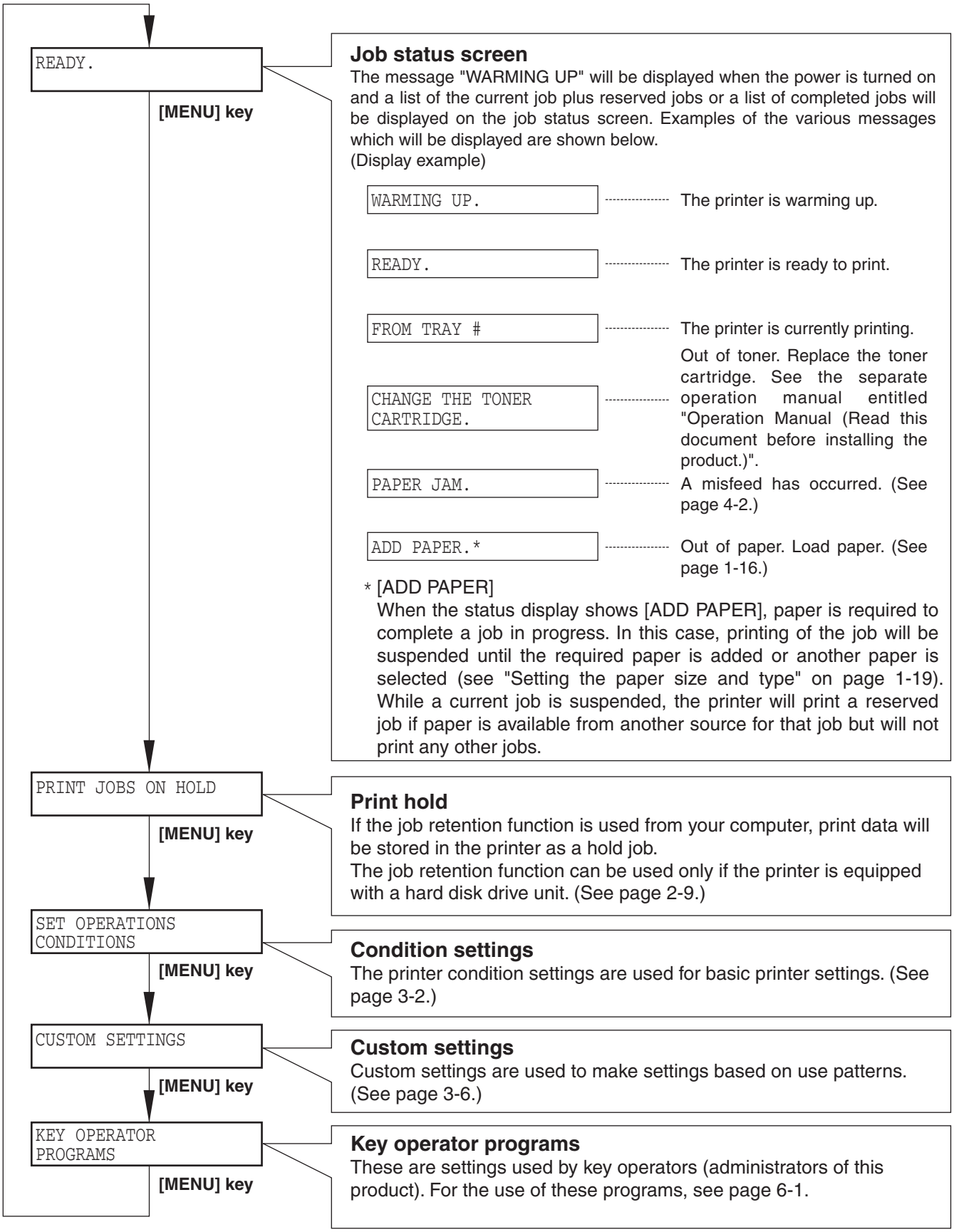
⑦ **[BACK/C] key**
Use this key to return to the previous screen in each menu selection, to cancel and delete the current job or to delete a reserved job that has been selected.

⑧ **[OK] key**
Press to register the selected menu or function.

⑨ **[INFORMATION] key**
When [i] is displayed with a message indicating a paper misfeed, the relevant operation procedure can be displayed by pressing the [INFORMATION] key. If the [INFORMATION] key or the [BACK/C] key is pressed while the operation procedure is displayed, the information mode will be canceled. If you press and hold down this key while printing is being performed or in standby, the total number of printed pages and quantity of toner remaining (as a percentage) will be displayed.

Menu group and explanation of the use of the keys on the main unit operation panel

The menu groups are classified into five groups and are selected consecutively by pressing the [MENU] key. If the [OK] key is pressed when the desired menu screen is displayed, a message will appear to indicate the next required operation.



Job status screen

The message "WARMING UP" will be displayed when the power is turned on and a list of the current job plus reserved jobs or a list of completed jobs will be displayed on the job status screen. Examples of the various messages which will be displayed are shown below.

(Display example)

WARMING UP.	The printer is warming up.
READY.	The printer is ready to print.
FROM TRAY #	The printer is currently printing.
CHANGE THE TONER CARTRIDGE.	Out of toner. Replace the toner cartridge. See the separate operation manual entitled "Operation Manual (Read this document before installing the product.)".
PAPER JAM.	A misfeed has occurred. (See page 4-2.)
ADD PAPER.*	Out of paper. Load paper. (See page 1-16.)

* [ADD PAPER]
When the status display shows [ADD PAPER], paper is required to complete a job in progress. In this case, printing of the job will be suspended until the required paper is added or another paper is selected (see "Setting the paper size and type" on page 1-19). While a current job is suspended, the printer will print a reserved job if paper is available from another source for that job but will not print any other jobs.

Print hold

If the job retention function is used from your computer, print data will be stored in the printer as a hold job.
The job retention function can be used only if the printer is equipped with a hard disk drive unit. (See page 2-9.)

Condition settings

The printer condition settings are used for basic printer settings. (See page 3-2.)

Custom settings

Custom settings are used to make settings based on use patterns. (See page 3-6.)

Key operator programs

These are settings used by key operators (administrators of this product). For the use of these programs, see page 6-1.

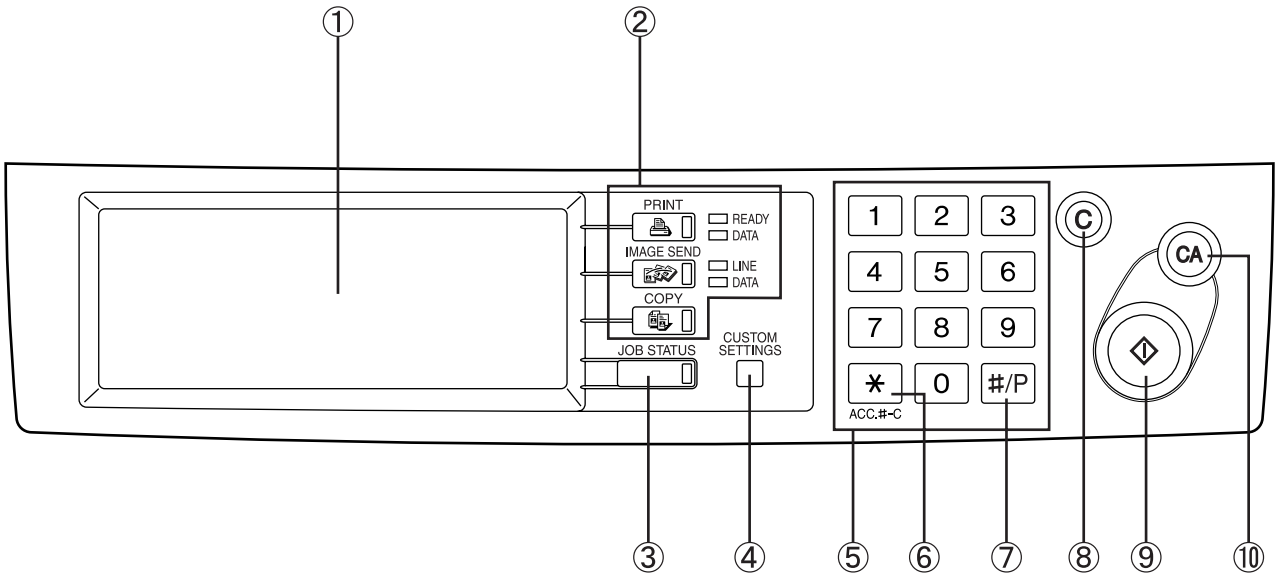
Canceling a print job and deleting print data

- To cancel a print job in progress and delete the print data:
  Press the [BACK/C] key during printing. Printing will stop and a message asking for confirmation to delete the job will appear. To delete the data, press the [OK] key.
  To cancel deletion, press the [BACK/C] key. Printing will resume.

- To delete print data of a reserved job (jobs stored in the printer):
  Print data transmitted from computers will be stored in this printer (up to 99 jobs) and will be printed sequentially. To delete print data of a reserved job before starting printing, press the [▲] or [▼] key to display the desired data in the message display. If you press the [BACK/C] key at this time, a confirmation message for deletion will appear. To delete the data, press the [OK] key.
  To cancel deletion, press the [BACK/C] key. Printing will resume.

Operation panel of the scanner module

When the printer is equipped with a scanner module, the operation panel on the main unit will become inoperative and the panel on the scanner module must be used.



① **Touch panel**
The machine status, messages and touch keys are displayed on the panel. The display will change to show the status of print, copy, network scan or fax according to which of those modes is selected. For details see the next page.

② **Mode select keys and indicators**
Use to switch the display mode of the touch panel.

[PRINT] key/READY indicator/DATA indicator
Press to enter the print mode. (See next page.)

- **READY indicator**
  Print data can be received when this indicator is lit.
- **DATA indicator**
  Lights up or blinks when print data is being received. Also lights up or blinks when printing is being performed.

[IMAGE SEND] key/LINE indicator/DATA indicator
Press to enter the network scan/fax mode. (See the facsimile operation manual.)

[COPY] key
Press to select the copy mode.*

③ **[JOB STATUS] key**
Press to display the current job status. (See page 1-14.)

④ **[CUSTOM SETTINGS] key**
Use to adjust the contrast of the touch panel or to set key operator programs. (See page 3-6.)

⑤ **Numeric keys**
Use to enter number values for various settings.

⑥ **[✳] key ([ACC.#-C] key)**
Use for account control for copying and fax sending.

⑦ **[#/P] key***
This key is used as a program key for copy features and in dialing for fax features.

⑧ **[C] key***
This key is active for copy and fax features.

⑨ **Start key***
Use to start copying and fax jobs.

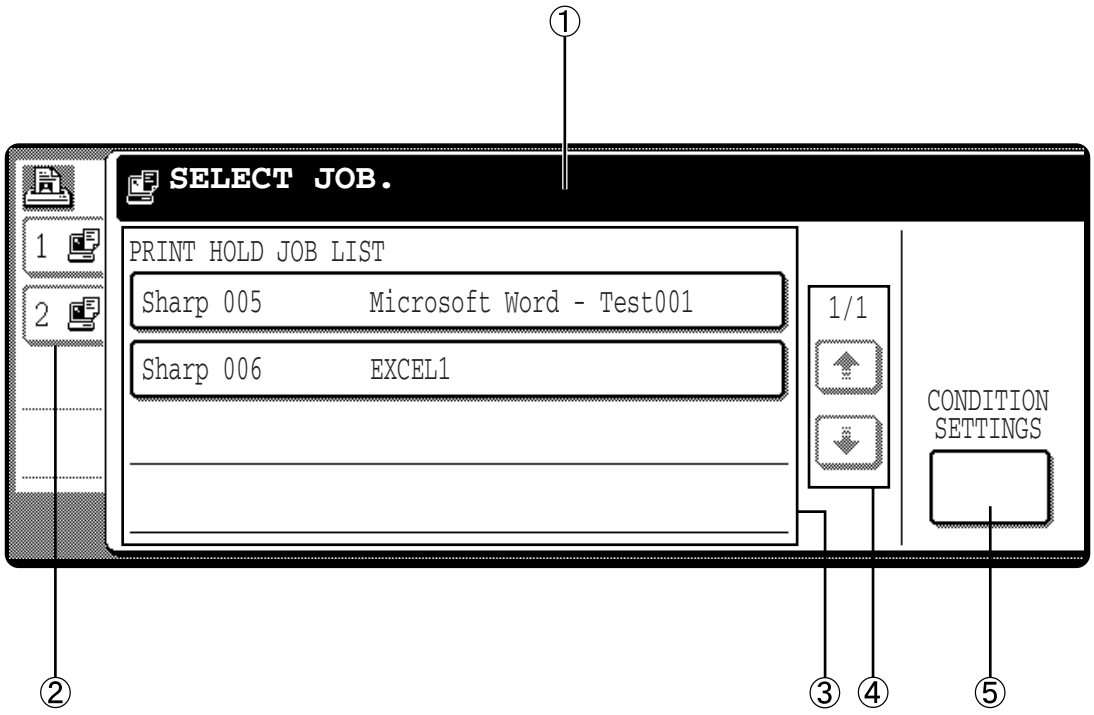
⑩ **[CA] key***
Functions in the copy and fax modes.

* See the operation manual for copier operation.

Touch panel (on the scanner module)

Print mode screen

This screen is displayed when the print mode is selected.
(The display varies with the mode. For the display in other modes, see their respective operation manuals.)



① **Message display**

② **Job status screen (See next page.)**

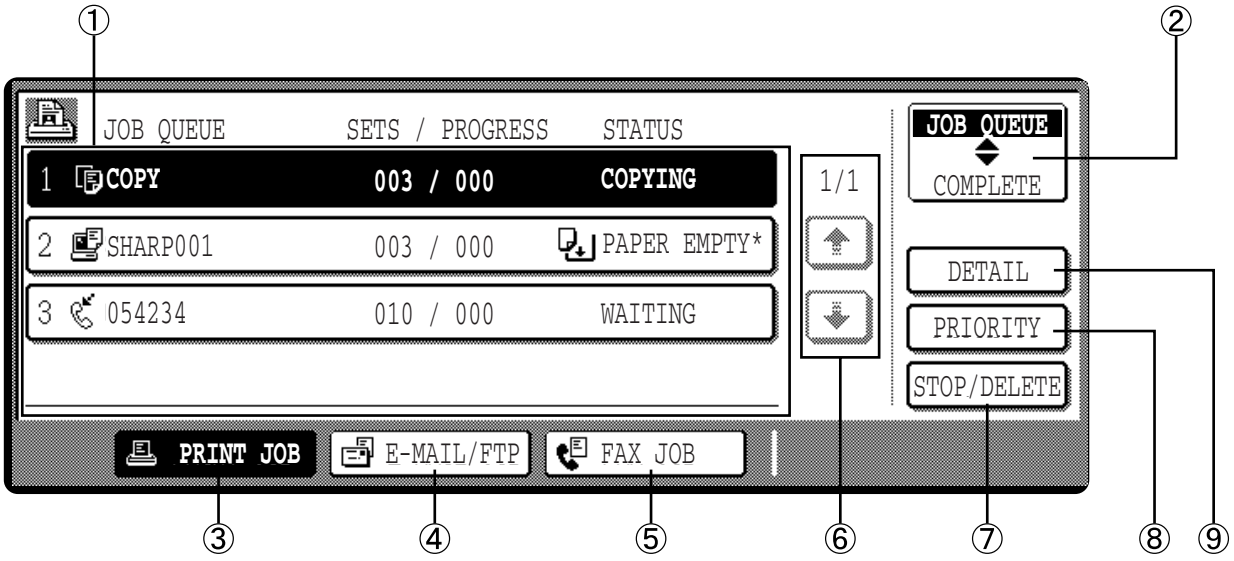
③ **Print hold job list**
If the job retention function (see page 2-9) is used, the list of stored print jobs is displayed here (up to 100 jobs). The job retention function can be used only if the printer is equipped with a hard disk drive unit. If the main switch is turned off, stored print data will be cleared.

④ **Display scroll keys**
Use these keys to view the job hold list when it is contained on more than one screen.

⑤ **[CONDITION SETTINGS] key**
Use to switch the display to the printer configuration menu (see page 3-2).

Job status screen (common to print, copy, network scan, and fax modes)

This screen is displayed when the [JOB STATUS] key on the operation panel is pressed.
A job list showing the current job at the top of the job queue or a list showing completed jobs can be displayed. The contents of the jobs can be viewed, moved up to the highest priority in the job queue or deleted from the queue.



① **Job list**
A job list which indicates the current job and reserved jobs or a job list which indicates completed jobs is displayed. The icons to the left of the jobs in queue represent the job mode.

Print mode
Copy mode
Network scan mode
Fax mode (transmission job)
Fax mode (reception job)

When a job list which indicates the current job and reserved jobs is displayed, the displayed jobs themselves are operation keys. To cancel printing or to give a job the highest print priority, touch the relevant job key to select the job and execute the desired operation using the keys described in ⑦, ⑧, and ⑨.

*** "PAPER EMPTY" in the job status display**
When a job status display indicates "PAPER EMPTY", the specified size paper is not loaded in any tray to run that job.
In this case, printing is suspended for that job until the required paper is loaded.
Until the required paper is loaded another reserved job data will be printed if possible.
(If paper runs out during printing, another job will not be printed.) If you wish to change the paper size because you do not have the specified size paper, you can change the size by touching the current job key to select it and touch the [DETAIL] key described in ⑨.

② **Mode switching key**
Use to switch the job list between "JOB QUEUE" and "COMPLETE".
"JOB QUEUE": Displays the list of the current job and the reserved jobs.
"COMPLETE": Displays the list of completed jobs.

③ **[PRINT JOB] key**
Use to display the print job list for all modes (print, copy, network scan, and fax).

④ **[E-MAIL/FTP] key**
Use to display the list of jobs that use the network for sending e-mail by SNMP protocol or sending to an ftp site or desktop by ftp protocol.

⑤ **[FAX JOB] key**
Use to display the fax communication status and the reserved transmission job status.

⑥ **Display switching keys**
Use to switch the page of the displayed job list.

⑦ **[STOP/DELETE] key**
Use to cancel or delete the current job or delete the selected reserved job. Received fax print jobs that have been reserved, however, cannot be deleted.

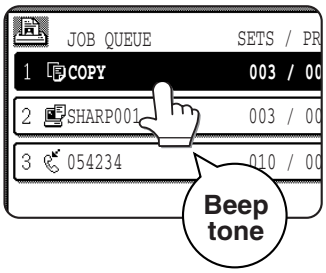
⑧ **[PRIORITY] key**
If you select a job among the reserved jobs in the "JOB QUEUE" job list to which you wish to give the highest priority and touch this key, the job will move to the highest priority reserved job.

⑨ **[DETAIL] key**
Use to display the detailed information of the selected job. The paper size for printing can be changed from the specified size.This function, however, cannot be used when a fax reception print job is selected.

Using the touch panel

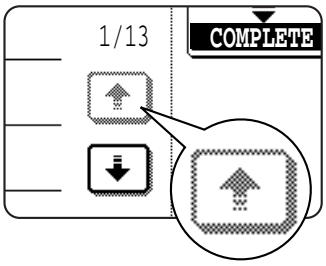
■ How to use the touch panel

[Example 1]



Items on the touch panel are easily selectable by touching the key associated with the item with a finger. Selection of an item will be accompanied with a beep tone to confirm the item was selected. Also, the key area for the item will be highlighted for visual confirmation.

[Example 2]

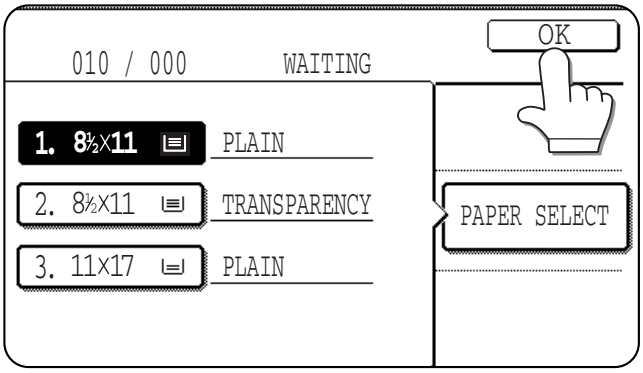


Keys which are grayed out on any screen are not selectable. If a grayed out key is touched, a double beep will be sounded.

The confirmation beeps can be disabled by a key operator program. (See page 6-9.)

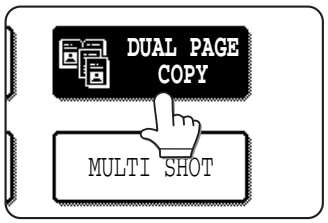
■ Selection of function

[Example 1]



Items which are highlighted at the time a screen appears are already selected and will be registered to function if the [OK] key is touched.

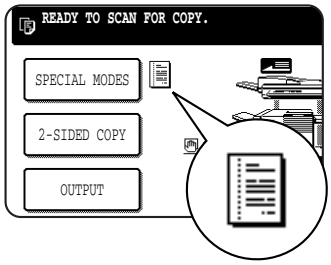
[Example 2]

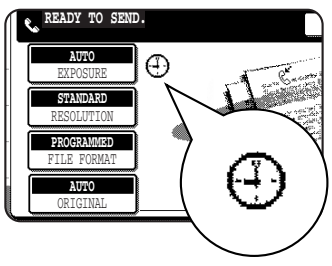


When the machine is used in the copy or fax modes, the functions shown below can only be set on the special feature screen. They can be set or cancelled by alternate touches on the panel.

Copier feature	Facsimile feature
• Dual page copy • Job build	• Polling • Dual page scan

[Example 3]





When the machine is used in the copy or fax modes and a special feature is selected, a corresponding icon representing the feature will appear on the touch key and on the main screen of the mode selected. If this icon is touched, the setting screen of the function (or a menu screen) will appear, allowing the settings to be checked or adjusted and the function to be canceled easily.

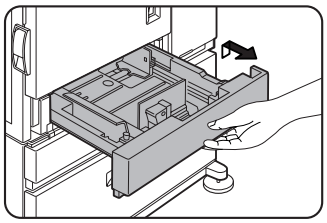
LOADING PAPER

The message "ADD PAPER" or "OPEN TRAY □□ AND ADD PAPER" will appear when paper runs out during operation. Follow the procedure below to load paper.

NOTES
- Do not use curled or folded paper. Doing so may cause a misfeed.
- For best results use paper supplied by SHARP. (See page 1-18.)
- When you change the paper type and size in paper tray 1, set the paper type and size referring to "Setting the paper size and type" (page 1-19).
- Do not place heavy objects or press hard on any tray which is pulled out.

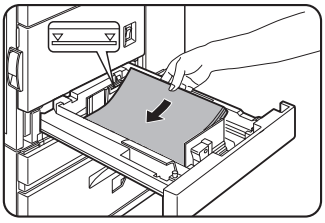
Loading paper in paper tray 1

1 Pull out paper tray 1.



Gently pull the tray out until it stops.

2 Load paper into the tray.



Do not load paper above the maximum height line (approximately 500 sheets of 20 lbs. (80 g/m^2) paper).

3 Gently push tray 1 into the machine.

Push the tray firmly all the way into the machine.

4 Set the paper type.

If you change the paper type, be sure to set the paper type referring to "Setting the paper size and type" (page 1-19).

5 Loading paper in paper tray 1 is now complete.

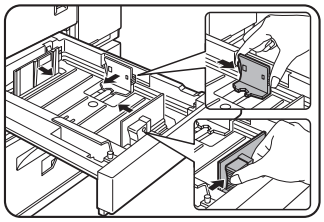
Changing the paper size in paper tray 1

For paper tray 1, 8-1/2" x 11", A4 or B5 size paper can be set. Use the following procedure to change the size as needed.

1 Pull out paper tray 1.

If paper remains in the tray, remove it.

2 Adjust the guide plates A and B in the tray to the length and width of the paper.



The guide plates A and B are slidable. Adjust them to the paper size to be loaded while squeezing their lock levers.

3 Load paper into the tray.

4 Gently push tray 1 into the machine.

Push the tray firmly all the way into the machine.

5 Set the paper size.

Be sure to set the paper size and paper type referring to "Setting the paper size and type" (page 1-19).
If this is not done, paper misfeeds will occur.

6 Changing paper size in paper tray 1 is now complete.

Specifications of paper trays

The specifications for types and sizes of paper for loading paper trays are shown below.

<table>
<tr><th colspan="2">Tray</th><th>Tray No.
(tray name)</th><th colspan="2">Applicable paper types</th><th>Applicable paper sizes</th><th>Paper weight</th></tr>
<tr><td colspan="2">Paper tray 1</td><td>Tray 1</td><td colspan="2">Plain paper (Refer to the next page for applicable plain papers.)</td><td>● 8-1/2 x 11, A4, B5</td><td>16 to 28 lbs. or 60 to 105 g/m²</td></tr>
<tr><td colspan="2" rowspan="4">Multi purpose drawer/bypass tray</td><td rowspan="4">Tray 2/bypass tray</td><td colspan="2">Plain paper (Refer to the next page for applicable plain papers.)</td><td>● If "AUTO-INCH" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2R, 5-1/2 x 8-1/2R
● If "AUTO-AB" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
A3, B4, A4, A4R, B5, B5R, A5R, 8-1/2 x 13
● Non-standard sizes</td><td>16 to 34 lbs. or 60 to 128 g/m²</td></tr>
<tr><td>Special paper (Refer to the next page for applicable special papers.)</td><td>● Thick paper
● Labels, transparency film</td><td>● If "AUTO-INCH" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
8-1/2 x 11, 8-1/2 x 11R
● If "AUTO-AB" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
A4, A4R, B5, B5R
● Non-standard sizes smaller than 8-1/2 x 11 or A4</td><td rowspan="3">See the remarks for special paper on the next page.</td></tr>
<tr><td>Postcard</td><td>● Japanese official postcard</td></tr>
<tr><td>Envelopes can only be fed from the multi-purpose drawer.
Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90 g/m².</td><td>● Applicable standard size envelopes:
COM-10, Monarch, DL, C5, ISO B5
● Non-standard size</td></tr>
<tr><td rowspan="3">Stand/3 x 500 sheet paper drawer</td><td>Upper</td><td>Tray 2</td><td colspan="3">Same as multi purpose drawer</td></tr>
<tr><td>Middle</td><td>Tray 3</td><td colspan="2" rowspan="2">Plain paper (Refer to the next page for applicable plain papers.)</td><td rowspan="2">● If "AUTO-INCH" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2R
● If "AUTO-AB" is selected in setting the paper size and type (page 1-19), the following paper sizes can be used with the automatic detection function:
A3, B4, A4, A4R, B5, B5R, 8-1/2 x 13</td><td rowspan="2">16 to 28 lbs. or 60 to 105 g/m²</td></tr>
<tr><td>Lower</td><td>Tray 4</td></tr>
<tr><td rowspan="2">Stand/ MPD & 2000 sheet paper drawer</td><td>Upper</td><td>Tray 2</td><td colspan="3">Same as multi purpose drawer</td></tr>
<tr><td>Lower</td><td>Tray 3</td><td colspan="2">Plain paper (Refer to the next page for applicable plain papers.)</td><td>● 8-1/2 x 11, A4</td><td>16 to 28 lbs. or 60 to 105 g/m²</td></tr>
</table>

■ Applicable plain paper

For satisfactory results, plain paper must conform to the following requirements.

	Paper in AB system	Paper in inch system
	A5 to A3	5-1/2 x 8-1/2 to 11 x 17
Plain paper	16 to 28 lbs. or 60 to 105 g/m²	
Recycled, colored, pre-punched, pre-printed and letterhead papers must conform to the same conditions as above.		

■ Applicable special paper

For satisfactory results, special paper must conform to the following requirements.

	Type	Remarks
Special paper	Thick paper	● For 5-1/2 x 8-1/2 to 8-1/2 x 11 or A5 to A4 sizes, thick paper ranging from 16 to 34 lbs. or 60 to 128 g/m² can be used. ● For sizes larger than 8-1/2 x 11 or A4, thick paper ranging from 16 to 28 lbs. or 60 to 105 g/m² can be used. ● Other thick papers Index stock (65 lbs. or 176 g/m²) can be used. Cover stock (110 lbs. or 200 to 205 g/m²) can be used but only for 8-1/2 x 11, A4 paper in the portrait orientation. ● For 5-1/2 x 8-1/2 or A5 paper, the orientation must be landscape.
	Transparency film, labels, and tracing paper	● Use SHARP recommended paper. Do not use labels other than SHARP recommended labels. Doing so may leave adhesive residue in the printer, causing paper misfeeds, smudges on prints or other machine trouble.
	Postcards	● Japanese official postcards can be used.
	Envelopes	● Applicable standard envelopes: COM-10, Monarch, DL, C5, ISO B5 ● Envelopes can only be fed from the multi-purpose drawer. Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90 g/m².

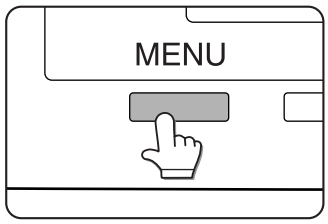
Setting the paper size and type

For the specifications for types and sizes of paper for loading paper trays, see page 1-17.

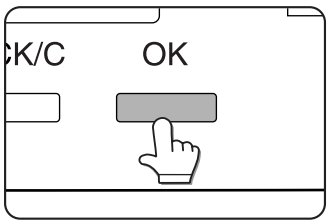
Setting the paper size and type from the operation panel on the main printer

When the paper size or type is changed in a paper tray, set them referring to the following procedure.

1 Press the [MENU] key repeatedly until "CUSTOM SETTINGS" appears in the message display.



2 Press the [OK] key.



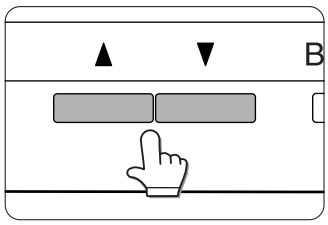
When the [OK] key is pressed,"TRAY SETTING" will appear in the message display.

3 Press the [OK] key.

TRAY SETTING
TRAY1▼

When the [OK] key is pressed,the message shown to the left will appear in the message display.

4 Select the desired paper tray.



Press the ▲ or ▼ key repeatedly until the desired paper tray is indicated in the display.

5 Press the [OK] key.

The paper size and paper type of the tray selected in step 4 will appear.

LETTER
PLAIN ▼

If TRAY 1 is selected in step 4, the message shown to the left will appear in the display.

6 Press the ▼ key.

CHANGE TRAY1
SETTING OK?

If TRAY 1 is selected in step 4, the message shown to the left will appear in the display.

7 Press the [OK] key.

To cancel the setting change, press the [BACK/C] key to return to step 4.

8 Select the paper type that has been set in the tray.

PLAIN
OK?

Press the ▲ or ▼ key repeatedly until the paper type that has been set appears.

NOTE

Special paper such as thick paper, transparency film, labels, and postcards can be set for tray 2 and the bypass tray.

Envelopes can be set only for tray 2.

9 Press the [OK] key.

10 Ensure that the desired paper size is selected.

LETTER
OK?

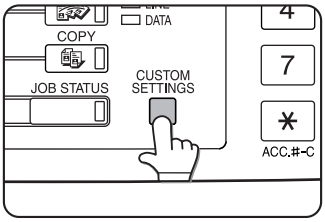
Press the ▲ key or ▼ key repeatedly until the desired paper size appears.

- Depending on the selected tray, a selection for "AUTO-AB" and "AUTO-INCH" may appear.
  "AUTO-AB": Select when you have set AB system paper.
  "AUTO-INCH": Select when you have set inch system paper.
  When the paper system is changed from the inch system to the AB system or vise versa, the paper type must be designated. Select the paper type.
- If you have set paper of non-standard size, select "NON STANDARD". This size can be selected when tray 2 or the bypass tray has been selected in step 4.

11 Press the [OK] key to complete the setting.

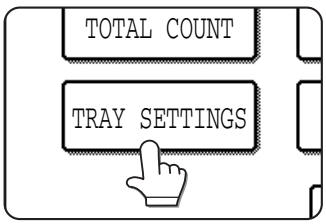
Setting the paper type and size from the touch panel

1 Press the [CUSTOM SETTINGS] key.



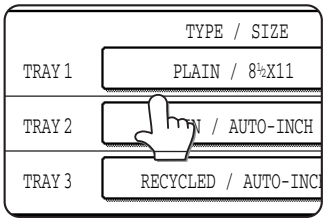
The custom setting menu screen will appear.

2 Press the [TRAY SETTINGS] key.



The paper tray selection screen will appear.

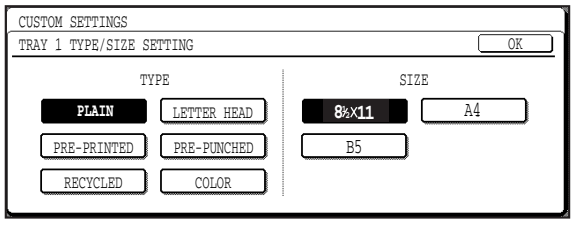
3 Select the paper tray for which the setting is to be made.



If the desired tray is not on the display, use [↑] or [↓] key to scroll the display until it appears.

4 Select the paper type and the paper size.

- If TRAY 1 has been selected in step 3:

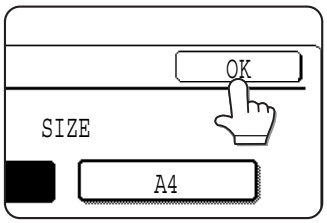


The highlighted keys indicate the current selections. To change either type or size or both, touch the desired keys to highlight the selections.

Paper types
Special papers such as transparency film and labels can be set for tray 2 and the bypass tray. Envelopes can be set only for tray 2.

Paper sizes
- Depending on the selected tray, a selection for "AUTO-AB" and "AUTO-INCH" may appear.
  "AUTO-AB": Select when you have set AB system paper.
  "AUTO-INCH": Select when you have set inch system paper.
  When the paper system is changed from the inch system to the AB system or vise versa, the paper type must be designated. Select the paper type.
- If you have set paper of non-standard size, select "NON STANDARD SIZE". This size key appears when tray 2 or the bypass tray has been selected in step 3.

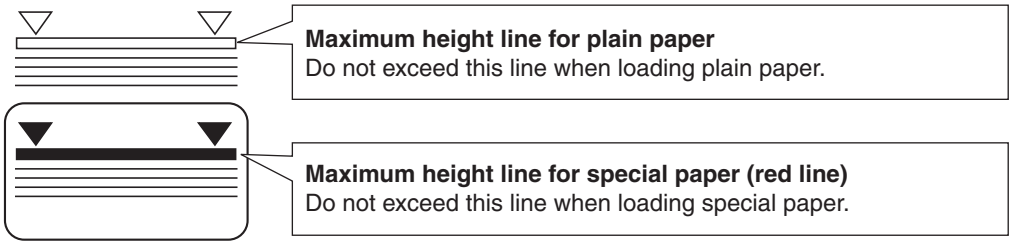
5 Touch the [OK] key to complete the setting.



Loading paper in the multi purpose drawer

The method of loading paper into the multipurpose drawer is the same as for paper tray 1 described on page 1-16. For specifications of paper, see page 1-17. When loading envelopes, postcards or transparency film, follow the descriptions below.

- Two maximum height lines are indicated: one for plain paper and one for special paper.



Maximum height line for plain paper
Do not exceed this line when loading plain paper.

Maximum height line for special paper (red line)
Do not exceed this line when loading special paper.

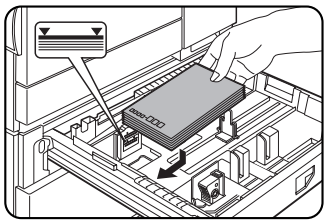
■ How to change the paper size

To change the paper size or paper type when paper is loaded into a tray, refer to page 1-19 for details.

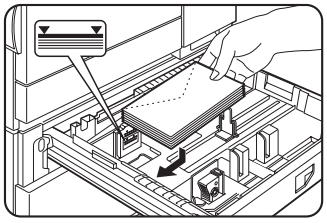
■ Setting envelopes or postcards

When setting envelopes or postcards in the multi purpose drawer, set them in the orientation shown below.

[Loading postcards]
Load postcards print side up to the rear left of the tray as shown.



[Loading envelopes]
Envelopes can only be printed on the address side. Be sure to place envelopes with the address side up and the top of the envelope to the rear.



Printing onto envelopes or postcards

- Attempting to print onto both sides of envelopes or postcards may result in misfeeds or poor prints.
- Do not use pre-printed envelopes.
- To avoid wrinkling, misfeeds or poor printing, make sure the postcard stock is not curled.

Printing onto envelopes

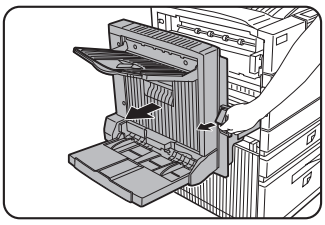
- Do not use envelopes that have metal clasps, plastic snaps, string closures, windows, linings, self-adhesive patches or synthetic materials. Attempting to print on these may cause misfeeds, inadequate toner adherence or other trouble.
- Envelopes of which the surface is not flat because of embossing may cause the prints to become smudges.
- Under high humidity and temperature conditions the glue flaps on some envelopes may become sticky and be sealed closed when printed.
- Use only envelopes which are flat and crisply folded. Curled or poorly formed envelopes may be poorly printed or may cause misfeeds.

Fusing unit pressure adjusting levers

When feeding envelopes from the multi purpose drawer, damage to the envelopes or smudges on prints may occur even if envelopes within specification are used. In this case, the problem may be reduced by shifting the fusing unit pressure adjusting levers from the normal position to the lower pressure position. Follow the procedure below.

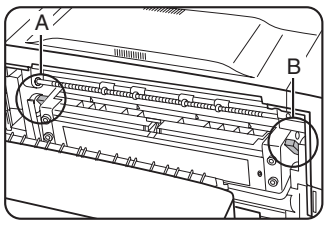
NOTE
Be sure to return the lever to the normal position when finished feeding envelopes. If not, inadequate toner adherence, paper misfeeds or other trouble may occur.

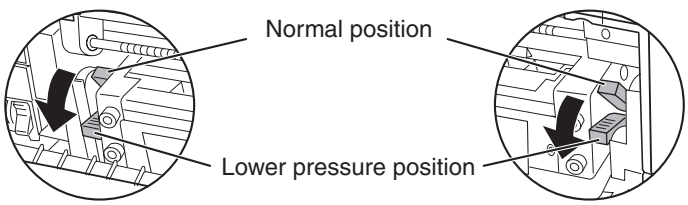
1 Unlatch the duplex module and slide it to the left.



Unlatch the module and gently move the module away from the machine. If the machine is not equipped with a duplex module, open the side cover similarly.

2 Lower the two fusing unit pressure adjusting levers marked A and B in the illustration.

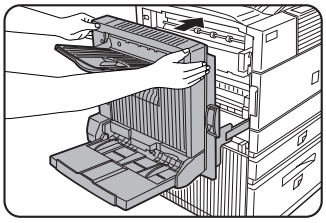




A: Rear side of fusing unit

B: Front side of fusing unit

3 Gently close the duplex module.



If the machine is not equipped with a duplex module, close the side cover.

■ Loading transparency film

Be sure to load the transparency film with the white label side up. Make sure no image will be printed on the label. Printing on the label may cause smudges on prints. Transparency film must be set in the portrait orientation.

Specifications (multi purpose drawer)

Name	Multi purpose drawer
Paper size/weight	See specifications of paper trays on page 1-17.
Paper capacity	500 sheets (20 lbs. (80 g/m²)) of paper, 40 envelopes, 20 postcards
Dimensions	25-3/4" (W) x 22-21/64" (D) x 5-43/64" (H) (654 mm (W) x 567 mm (D) x 144 mm (H))
Weight	Approximately 24.3 lbs. or 11 kg

Specifications are subject to change for improvement without notice.

Loading paper in the stand/3 x 500 sheet paper drawer

Upper paper tray:
The upper tray is the same as the multi-purpose drawer. Use the upper tray according to the instructions for the multi-purpose drawer on page 1-21.

Middle and lower paper trays:
Up to 500 sheets of SHARP recommended plain paper can be loaded in these trays. The method of loading paper is the same as for paper tray 1 in the main unit. See the description (page 1-16).

NOTE
If the paper size or paper type is changed in either paper tray, the tray settings must be changed in custom settings. Refer to “Setting the paper size and type” on page 1-19.

Specifications (stand/3 x 500 sheet paper drawer)

Name	Stand/3 x 500 sheet paper drawer
Paper size/weight	See specifications of paper trays on page 1-17.
Paper capacity (ordinary paper)	500 sheets (20 lbs. (80 g/m²)) each
Dimensions	24-3/8" (W) x 26-5/32" (D) x 15-29/32" (H) (619 mm (W) x 664 mm (D) x 404 mm (H))
Weight	Approximately 70.6 lbs. or 32 kg

Specifications are subject to change for improvement without notice.

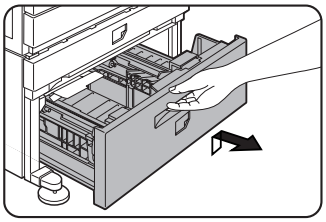
Loading paper in the stand/MPD & 2000 sheet paper drawer

Upper paper tray:
The upper paper tray is equivalent to the multi purpose drawer. The method of loading paper and the paper that can be used are the same as for the multi purpose drawer. Refer to the description of the multi purpose drawer (see page 1-21).

Lower paper tray:
The lower paper tray is a large capacity tray that holds 2,000 sheets of 8-1/2" x 11" or A4 paper (20 lbs. (80 g/m²)). Use the following procedure to load paper in the large capacity tray.

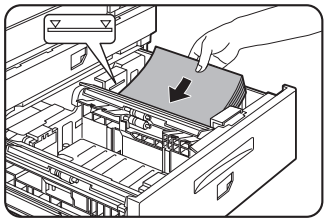
> **NOTE**
> If the paper size or paper type is changed in either paper tray, the tray settings must be changed in custom settings. Refer to "Setting the paper size and type" on page 1-19.

1 Pull out the large capacity tray.

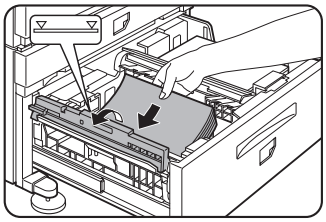


Gently pull the tray out until it stops.

2 Load paper onto the right and left paper feed tables.

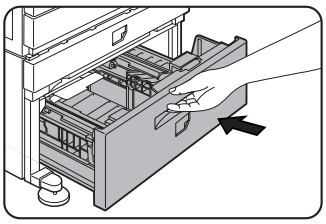


- Load paper onto the right paper feed table. The right table holds approximately 1,200 sheets.



- Raise the paper guide and load paper onto the left paper feed table. The left table holds approximately 800 sheets. After loading paper, be sure to return the paper guide.

3 Gently push the large capacity paper tray into the printer.



Push the tray firmly all the way into the printer.

4 Set the paper type.

If you have changed the paper size from the AB system to the inch system or vice versa, select the relevant type referring to "Setting the paper size and type" on page 1-19.

5 Loading paper in the stand/MPD & 2000 sheet paper drawer is now complete.

Specifications (stand/MPD & 2000 sheet paper drawer)

Name	Stand/MPD & 2000 sheet paper drawer
Paper sizes/weight	See specifications of paper trays on page 1-17.
Paper capacity (ordinary paper)	Upper tray: 500 sheets (20 lbs. (80 g/m²)), Lower tray: 2,000 sheets (20 lbs. (80 g/m²))
Dimensions	24-3/8" (W) x 26-5/32" (D) x 15-29/32" (H) (619 mm (W) x 664 mm (D) x 404 mm (H))
Weight	Approximately 75 lbs. or 34 kg

Specifications are subject to change for improvement without notice.

ADDING TONER

When toner runs out, the message “CHANGE THE TONER CARTRIDGE” will appear on the display indicating that the toner cartridge must be replaced. For some models, a message to replace the developer cartridge may appear.

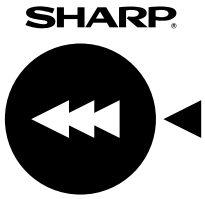
For the procedure for replacement of these cartridges, see the separate “Operation manual (Read this document before installing the product.).”

NOTE
If you press and hold down the [INFORMATION] key or the [COPY] key while printing is being performed or in standby, the quantity of toner remaining (as a percentage) will be displayed. When the percentage becomes 25 - 0 %, prepare a new toner cartridge.

STORAGE OF SUPPLIES

Standard supplies for this product that are to be replaced by the user include paper, toner cartridge (drum/toner cartridge), developer cartridge*, and staple cartridge for the finisher.

* For some models, developer cartridges are not replaced by users.



GENUINE SUPPLIES

For best copying results, be sure to use only Sharp Genuine Supplies which are designed, engineered, and tested to maximize the life and performance of Sharp products. Look for the Genuine Supplies label on the toner package.

■ Proper storage

1 Store the supplies in a location that is:
- clean and dry,
- at a stable temperature,
- not exposed to direct sunlight.

2 Store paper in the wrapper and lying flat.
- Paper stored in packages standing up or out of the wrapper may curl or become damp, resulting in paper misfeeds.

CHAPTER 2

PRINTING FROM A COMPUTER

This chapter describes how to install and how to use the printer drivers and printer utilities on a computer. This chapter also describes the job retention function that allows a print start operation from the operation panel of the printer.

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UNINSTALLING PRINTER DRIVERS AND PRINTER UTILITIES 2-3
INSTALLING PRINTER DRIVERS USING PLUG & PLAY OR THE “ADD PRINTER WIZARD” 2-4
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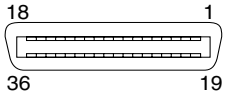
CONNECTING TO A COMPUTER

1. Using this machine as a local printer

When using this machine as a local printer, connect your computer to the parallel interface connector as shown in the illustration.

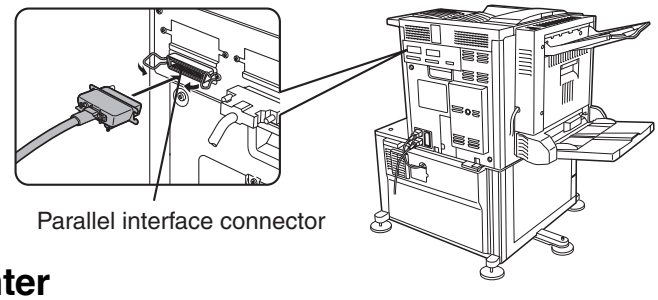
The cable is not supplied with the printer. A shielded cable which conforms to both the printer specifications and your computer specifications must be obtained. Consult your computer manual for the computer connection requirements.

The parallel interface of the printer conforms to IEEE-STD-1284-1993.



The connector type on the printer is a 36-pin DDK 57LE-40360-730B (D29) female connector or equivalent.

For the specifications of the parallel interface connector on the computer, see the computer manual.



2. Using this machine as a network printer

For using this machine as a network printer, a print server card is needed.
See the operation manual supplied with the print server card.
For a network cable, use a shielded cable.

SOFTWARE FOR WINDOWS

When using this product in a Windows environment, you must install a printer driver in your computer system. Use the CD-ROM supplied with this unit for the installation. This product can be connected through a parallel interface connector as described above, or connected as a network printer through a print server card (network interface card).
The print server card may be installed as a standard component or an optional component depending upon the specific printer model.

The following software for Windows is contained in the CD-ROM.

- Printer drivers
- Printer utilities
- Installer

  This is software for installing the printer drivers and printer utilities. If you use Plug and Play or the “Add Printer Wizard” to install the driver without using the installer, see instructions on page 2-4.

■ Printer drivers

- PCL printer drivers (PCL5e and PCL6)
- Optional PostScript printer driver (compatible to PostScript 3) and PPD files (PostScript Printer Description files)

■ Printer utilities

- Printer Administration Utility
- Printer Status Monitor
- PCL Display Font

1. Printer drivers

Printer driver software converts print data from any application into data understood by the printer.

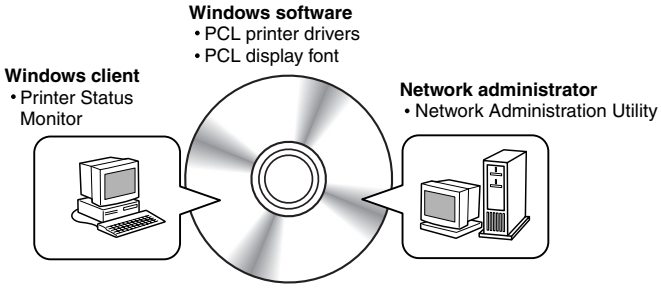
2. Printer utilities

Printer Administration Utility* provides setting and monitoring of printers on a computer. The Printer Status Monitor provides monitoring of printer status, display and notification on a computer for network environment. (only in the Windows environment)

For use of Printer Administration Utility and Printer Status Monitor, see the help file.

* Printer Administration Utility is software for system administrators.

INSTALLING PRINTER DRIVERS AND PRINTER UTILITIES



The following software can be installed from the installer supplied in the CD-ROM :

- PCL printer drivers (PCL5e and PCL6)
- PCL display font
- Printer Administration Utility
- Printer Status Monitor

Execute installation from the CD-ROM using the following procedure.

1 Start Windows.

2 Insert the supplied CD-ROM into a CD-ROM drive of your computer.
If your computer is configured for auto start on the CD-ROM, the language select or user select screen described in step 5 will appear. (Steps 3 and 4 are not needed.)

3 On the [Start] menu, click "Run."

4 Enter the CD-ROM drive and setup command. Then click the [OK] button.
Example: If the CD-ROM drive is designated as drive R, enter "R:\SETUP.EXE".

5 Read the text of Readme First and then click the [Next] button.

6 Select the tools to be installed and click the [Next] button.

- If you select general user tools, you can install the following software.
  PCL5e printer driver, PCL6 printer driver, PCL display font, Printer Status Monitor
- If you select administrator tools, you can install the following software.
  Printer Administrator Utility

7 The printer drivers and printer utilities that can be installed from the CD-ROM will be listed. Select the check boxes of the desired drivers and utilities and click the [Next] button.

If you click the icon next to a check box and click the [display README] button, the information of the specified software will be displayed. When installing the Printer Administration Utility and the Printer Status Monitor, read the README text and check to see if the computer system requirements are satisfied.

NOTE
The Printer Administration Utility and the Printer Status Monitor can be used only if this product is used as a network printer.

8 Click the [Start] button.

The installation screen of the file selected with a check box will appear. Follow the instructions on your screen to install the selected printer drivers and utilities.

9 When installation is complete, the message "Setup has finished installing your selected package(s)." will appear. Click the [Close] button.

NOTE
Restart of your computer may be needed depending on the system. Click [Yes] to restart the computer.

UNINSTALLING PRINTER DRIVERS AND PRINTER UTILITIES

When uninstalling a printer driver that has been installed from the Add Printer wizard, right-click the printer to be deleted from "Printers" of "Control Panel" and select [Delete]. When uninstalling a printer driver that has been installed using the installer, the Printer Administration Utility or the Printer Status Monitor, use "Add/Remove Programs" of "Control Panel". Use the Windows standard operation for each case.

INSTALLING PRINTER DRIVERS USING PLUG & PLAY OR THE "ADD PRINTER WIZARD"

Before installation

Before installing the printer drivers, check the following items.

- Ensure that your computer system meets the following requirements.

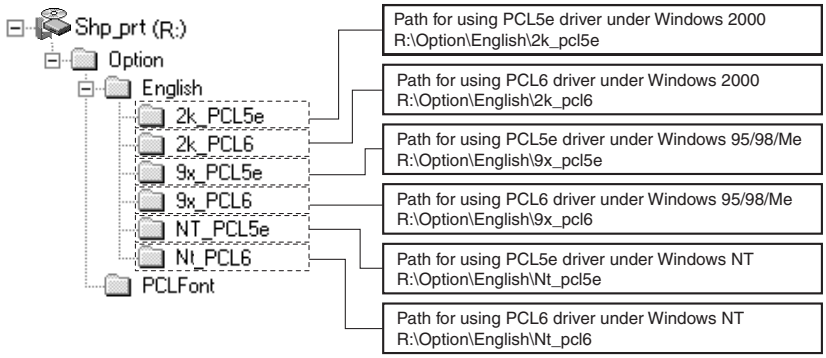
Computer type:

IBM PC/AT or compatible computer
Hardware requirements of the operating system must be satisfied.

Operating system:

Windows 95
Windows 98
Windows 2000
Windows NT 4.0
Windows Me

When using Plug and Play or using the "Add Printer Wizard" to install printer drivers, enter the directory name indicated below as a source directory.



■ Example of installation of a printer driver using the "Add Printer Wizard" under Windows 98

The installation method of a printer driver under Windows 98 is shown below.
The installation example is described assuming that the printer is connected as a local printer (see "Using this machine as a local printer" on page 2-2) and that the CD-ROM drive is designated as drive R. The procedure may differ depending on the system environment.

1 Start Windows 98.

2 Insert the supplied CD-ROM into the CD-ROM drive.
If your computer is configured for auto start on the CD-ROM, Readme First screen will appear. Click [Cancel] to close the screen.

3 On the [Start] menu, select [Settings] and then [Printers].
The Printer window will appear.

4 Double-click the [Add Printer] icon.

5 Click the [Next] button.

6 Check the [Local Printer] radio button and then click the [Next] button.

7 Click the [Have Disk] button.

The "Install From Disk" dialog box will appear.
Enter the file path as follows:
R:\Option\English\9x_pcl5e or
R:\Option\English\9x_pcl6

8 Click the [OK] button.

9 Select the printer model to be used and click the [Next] button.
Follow the instructions displayed by the "Add Printer Wizard."

■ Installing PCL display fonts

The PCL display fonts are the fonts displayed on your computer screen. The CD-ROM supplied with this product contains the PCL display fonts that correspond to the resident fonts of this product. These display fonts can be installed to your computer (Windows 95/98/Me/NT/2000) from the installer. Installation of the PCL display fonts can be specified in step 6 of "INSTALLING PRINTER DRIVERS AND PRINTER UTILITIES" on page 2-3.
To install the PCL display fonts by Windows basic operation without using the installer(Start→Settings→Control Panel→Fonts→Install New Font), specify the following path.
R:\Option\PCLFont
The CD-ROM drive is designated as drive R as an example.

SETTING THE PRINTER DRIVER

This section describes the method of changing the printer driver settings from your computer.
If no printer driver has been installed, use the supplied CD-ROM to install it referring to "INSTALLING PRINTER DRIVERS AND PRINTER UTILITIES" on page 2-3.

Printer driver settings under Windows (selecting and setting print conditions)

Change the settings using the printer properties.

■ Windows 95 / 98 / Me

Screens for Windows 98 are used in the description below.

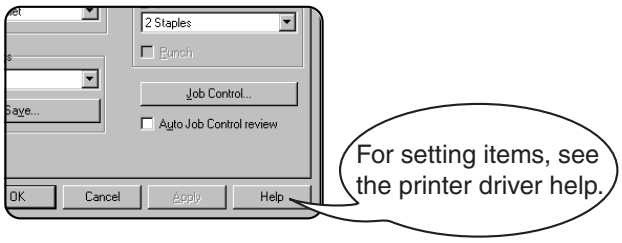
1 On the [Start] menu, select [Settings] and then [Printers].

The Printer window will appear.

2 Right-click the installed printer driver and select [Properties].

This example is the screen displayed by selecting AR-P350PCL5e.

3 Set each item.



4 Click the [OK] button.

■ Windows NT 4.0 / 2000

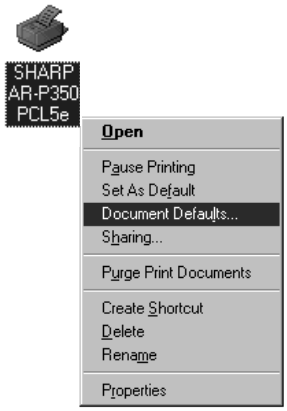
Screens for Windows NT 4.0 are used in the description below.

1 On the [Start] menu, select [Settings] and then [Printers].

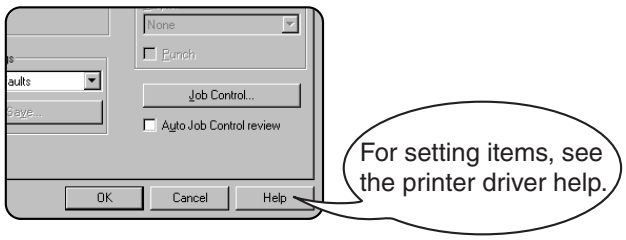
The Printer window will appear.

2 Right-click the installed printer driver and select [Document Defaults].

This example is the screen displayed by selecting AR-P350PCL5e.



3 Set each item.



4 Click the [OK] button.

NOTE
For the setting concerning optional peripheral devices such as the duplex module, finisher, and stand/3 x 500 sheet paper drawer, right-click the installed printer, select [Properties], and then open the [Configuration] tab. If you use this product as a network printer and you have installed the Printer Status Monitor, the configuration of peripheral devices will be automatically set by clicking "Auto Configuration". If you click the [Update Tray Status] button in the [Tray Status] dialog box of the [Paper] tab, the current tray information (paper size, paper type, and quantity of paper remaining) will be displayed.

PRINTER CONFIGURATION THROUGH THE NETWORK

If you access the Web pages of this product from your computer using a Web browser such as Netscape Navigator and Internet Explorer, various settings can be adjusted through the network.

Environment required for accessing Web pages

The following products and computer system requirements are needed for accessing the Web pages of this product.

- Optional print server card (network interface card)
- Recommended Web browser
  Microsoft Internet Explorer 4.0 or later or equivalent
  Netscape Navigator 4.0 or later or equivalent

NOTE
The following characters cannot be input in the Web pages when setting the Web pages in the Web server located in this product. Input characters are case-sensitive.

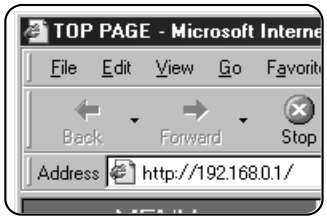
- Characters that cannot be input: < > ”
- Examples of improper input: <abc> <abc “abc” “abc abc”

Accessing Web pages and displaying help

Use the following procedure to access the Web pages. If the help button under the menu frame is clicked, the help screen for description of various function settings that can be operated remotely from the Web pages for this product through the network will appear. For the setting of each function, see the detailed description.

1 Open the Web browser on your computer.

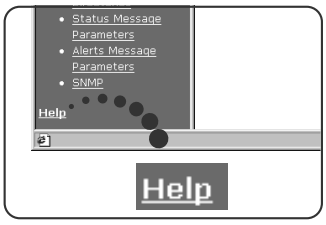
2 Input the IP Address previously specified for this product to the ADDRESS field of the browser.



Input the IP address previously specified in this product. (See page 6-13.)

When the connection is completed, the Web page information of this product will be displayed.

3 Click the [Help] button under the menu frame.



For details of each function setting, see the help under the menu frame. The configuration settings are described in detail.

4 Close the help.

Click the ☒ button. The display will return to the Web page information of this product.

Items and outline of menu frame of Web pages

Destination Management

The basic screen on which you can add, modify, or delete the destinations for image data scanned by the network scanner. The recipient information for facsimile and Internet facsimile features (destination address, facsimile number, etc.) is described below.

- Up to 500 destinations in total can be registered. In addition, up to 100 destinations can be registered in the file server and desktop in total.

■ Setting E-mail Destinations

Sets the destination information for E-mail delivery from the network scanner.
Destination E-mail addresses and file types as well as information for destination control (destination name, index, name for front panel display, etc.) are configured by this control.

■ Setting FTP Destinations

Sets the storage location information for file server storage scan of network scan data. File server information (such as host name) and file types as well as information for destination control (destination name, user index, name for front panel display, etc.) are configured by this control.

■ Setting Desktop Destinations

Sets the destination information for desktop delivery of network scan data. Destination computer information (such as host name) in which the network scanner tool/Sharpdesk has been installed and file types as well as the information for destination control (destination name, user index, name for front panel display, etc.).

■ Setting Fax Destinations

Sets the fax destination. Fax numbers of recipients and communication mode as well as information for destination control (destination name, index, name for front panel display, etc.).

■ Setting i-Fax Destinations

Sets the Internet fax destination information. E-mail addresses of destination and file types as well as information for destination control (destination name, index, name for front panel display, etc.).

■ Setting Group Destinations

Sets destination groups for transmitting data at a time by collecting destinations that have been set as E-mail destination, fax destination and i-fax destination.

■ Delete Destination

Screen for checking to see if deletion may be executed after selecting a destination to be deleted from the destination list on the destination management screen and clicking the Delete button. The destination data will be deleted when the Yes button is clicked.

Fax Memory Box Management

Basic screen for setting the memory area (memory box) for fax images. The memory box has the following three functions. Up to 100 items in total can be registered for these functions.

- Polled memory box control
- Relay broadcasting
- Confidential reception

■ Polled Memory Box Control

Original data that has been stored in this machine can be transmitted to another facsimile machine when the remote facsimile machine requests transmission.

■ Confidential reception

Data to be printed is sent to this machine and held until released for printing from the operation panel of this machine.

■ Relay broadcasting

Memory box information for transmitting received data can be configured by this control.

Access setup

The restriction on access to the Web pages and basic settings for using the network scanner and the status/alert E-mail function are described below.

■ **Network Card Setup**

A link to the network card Web page for configuring the print server card (network interface card) is provided. The Admin password is the same as the Web Page password of the network card.

■ **Password Setup**

Password access to the Web pages can be set. Two types of passwords (user and administrator) are configurable. The Admin password is the same as the Web Page password of the network card.

■ **Network Scanning Setup**

Basic setting screen for the network scanner. E-mail subject for scanner delivery, file name, etc. are set. To use the network scanner, you must set up E-mail & DNS Setup. This screen displays the E-mail & DNS Settings and provides a link to E-mail & DNS Setup.

■ **Status & Alert E-mail Setup**

Basic setting screen for the status & alert E-mail system. Machine name, machine code, and machine installation location are set. To use the status & alert E-mail function, you must set up E-mail & DNS Setup. This screen displays the settings of E-mail & DNS Settings and provides a link to E-mail & DNS Setup.

■ **E-mail & DNS Setup**

Basic setting screen for transmitting E-mail. E-mail server, system administrator address, DNS server, etc. are set.

■ **Sender E-mail Setup**

The sender of E-mail transmissions from the network scanner is configured. The sender will be set as the “From” item of the E-mail header. Up to 20 senders can be registered and a sender can be selected among them from the operation panel.

■ **Custom Directory Setup**

User index names in the display list on the operation panel are set.

■ **Status Message Parameters Setup**

The parameters used when the current counter information of this machine such as print count, copy count, and total output is delivered in accordance with the specified schedule by an E-mail status message.

■ **Alerts Message Parameters Setup**

The parameters for the alert message address information are registered by alert message setup. The alert message is transmitted when a problem such as a supplies requirement (toner or paper) or errors(device failure or paper misfeed) occur.

■ **SNMP Trap Setup**

IP addresses, trap community, and authentic community are set.

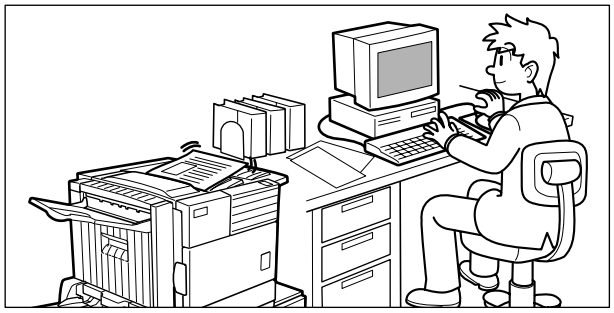
JOB CONTROL

This section describes the operation procedure required for "JOB CONTROL". To use job control in your print job, select "Properties" on the printer driver screen, open the "Main" tab, and click "Job control." The job hold function can be used only if your printer is equipped with the hard disk drive option.

"JOB CONTROL" operation

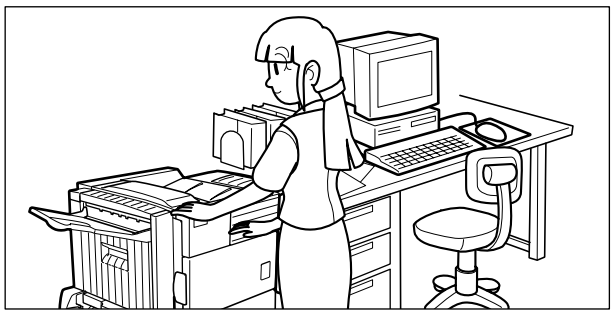
1 Normal print

(For "Normal print", no input from the operation panel of the printer is needed.)



The print setting in this mode is the basic print operation. If no problem such as a paper misfeed and empty toner occurs in the printer, the print start operation is completed on the computer and printing will be executed on the printer.

2 Hold after print

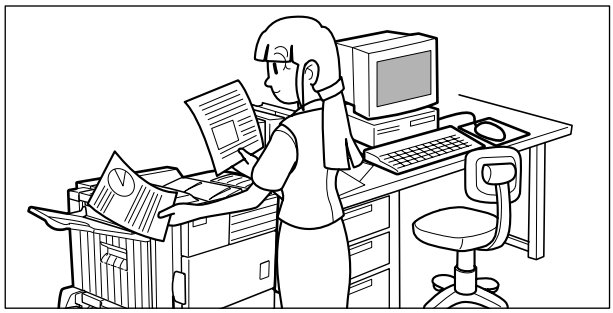


In this mode, print data will be held in the hold job list even after printing is complete. Printing can be executed again from the operation panel of the printer if needed. Also the data can be deleted from the operation panel if it is not necessary.

3 Hold before print

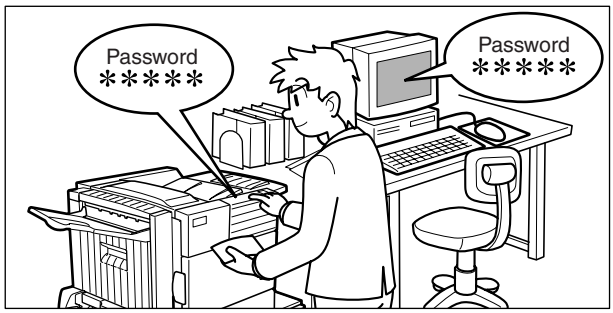
This print mode can reduce the possibility of missing printout. If printing is made in this mode from the computer, print data will not be output immediately and will be stored in the printer as a hold job until released from the operation panel. Print start operation can be made on the operation panel of the printer as needed. Also you can delete the data without executing printing. (See step 7 on page 2-10 or step 5 on page 2-11.)

4 Proof print



This mode can prevent a high-volume misprint when a lot of sets must be printed. If printing is executed in this mode, only one set will be printed and the remaining sets will be held as a hold job.
After checking the finished printout including print position on paper and stapling position, you can start printing of the remaining sets from the operation panel of the printer. Also you can delete the data without executing printing. (See step 7 on page 2-10 and step 5 on page 2-11.)

5 Password (5 digits)



If a password is set in the printer driver setting, a password entry is needed to start printing of a password protect job. This mode can increase the security of hold jobs.

- **Hold After Print mode with password:**
  Password entry on the operation panel of the printer is needed for additional printing the hold job.
- **Hold Before Print mode with password:**
  Password entry on the operation panel of the printer is needed to start printing.
- **Proof Print mode with password:**
  Password entry on the operation panel of the printer is needed for printing remaining sets after printing one set. The first set is printed without password entry.

Hold job list

If "Print after hold", "Print before hold" or "Proof print" operation is performed on the computer, print data will be held as a hold job. (Up to 100 jobs can be held. ***If the main switch is turned off, the stored data of all jobs in hold will be cleared.***)

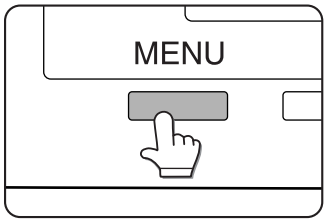
If the number of jobs exceeds 100, the job is processed as follows.

- **If Hold After Print is executed:**
  Printing will be executed but the job will not be held. (A notice page will be printed. See page 7-5.)
- **If Hold Before Print is executed:**
  Printing will not be executed and the job will not be held. (A notice page will be printed. See page 7-5.)
- **If Proof Print is executed:**
  Printing of one set will be executed but the job will not be held. (A notice page will be printed. See page 7-5.)

When the machine is being operated from the operation panel on the main unit:

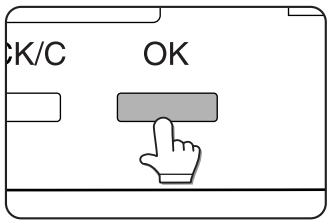
- For operation from the operation panel with touch panel, see the next page.

1 Press the [MENU] key.



"PRINTJOBS ON HOLD" will appear in the message display.

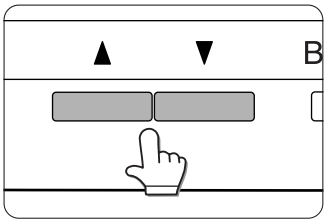
2 Press the [OK] key.



When the [OK] key is pressed, a user name and a file name of the print data stored as a hold job will appear.

```
ARAI
WORD-1                    ▼
```

3 Select the desired data.



Press the ▲ or ▼ key on the operation panel repeatedly until the desired print job is displayed.

4 Press the [OK] key.

5 Enter the first digit of the password and press the [OK] key.

(needed only if a password has been set)
Be sure to enter the same number that has been entered on the computer. If no password has been set, operation of steps 5 and 6 is not needed. (Proceed to step 7.)

```
PIN
                    -----
```

NOTE:
The password is entered one digit at a time starting with the first digit. The inactive digits are shown as "-".

When you press the [OK] key to register the first digit after entering it using the ▲ or ▼ key on the operation panel, "∗" will appear and "-" at the second digit will blink. If you press the [BACK/C] key, you can correct the entered number.

6 Use the same procedure as step 5 to enter the password from the second digit to the fifth digit and then press the [OK] key.

```
PIN
                    ∗----
```

7 Select execution of printing, cancellation of printing or data retention after printing, and then press the [OK] key.

Deletion or retention of data after printing can be selected. Alternatively deletion of data without printing can be selected. Press the ▲ or ▼ key until the desired choice appears

```
PRINT AND DELETE THE
DATA-OK?                  ▼
```

- Data will be deleted after printing.

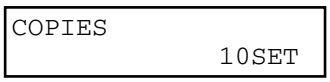
```
PRINT AND SAVE THE
DATA-OK?                  ▼
```

- Data will be held after printing.

```
DELETE THE DATA-OK?
                          ▼
```

- Data will be deleted without printing.
  If this item is selected, the operation will be complete. Steps 8 and 9 are not needed.

8 Verify that the desired number of copies is set.



The number of copies can be changed by using the ▲ or ▼ key on the operation panel.

9 Press the [OK] key.

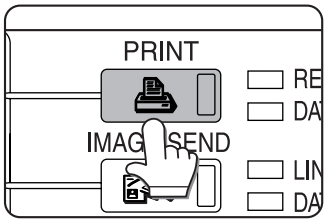
- Printing will start. If printing of another job is being executed, however, your job will be registered as a print job. Printing of the job will start after preceding jobs are completed.

10 Operation is now complete.

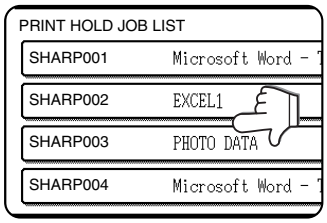
To continue operation, repeat steps 1 to 9.

When the machine is being operated from the touch panel on a scanner module:

1 Press the [PRINT] key to display the printer basic screen.

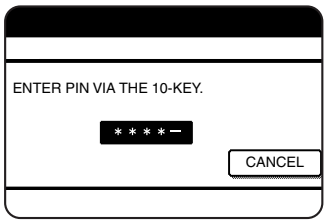


2 Select the desired data.



To switch the screen, touch the ▲ or ▼ key.

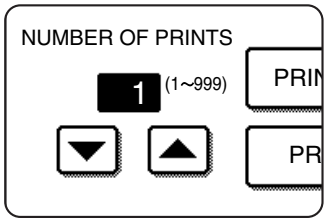
3 Use the [Numeric] keys to enter the 5-digit password.
(needed only if a password has been set)



Be sure to enter the password that has been entered on the computer. If no password has been set, operation of this step is not needed.

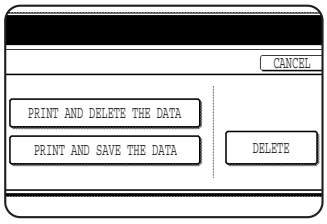
NOTE:
Each time a number is entered, "–" will change to "∗".

4 Ensure that the desired number of prints is set.



The number of prints can be changed by using the ▲ or ▼ key.

5 Execute printing.



To delete the print data after completing the print job, touch the [PRINT AND DELETE THE DATA] key. To keep the print data after printing, touch the [PRINT AND SAVE THE DATA] key. To cancel printing and clear the print data, touch the [DELETE] key.

- If you select execution of the print job, printing will start. If printing of another job is being executed, your job will be registered as a print job. Printing of the job will start after preceding jobs are completed.

6 Operation is now complete.

Printer account control

If the key operator program “Auditing mode” is set, the number of printed pages can be accumulated for each account. The accounts for auditing are the accounts that have been set for counting the number of pages for the printer with a key operator program. For registration of account numbers, see the key operator programs (page 6-7).

When executing print operation from the computer, you must enter an account number on the setting screen of the printer driver. The account number entry screen will be displayed by clicking “Job control” in the “Main” tab of the printer driver.

When an invalid account number is entered or no account number is entered, if key operator program “Cancel jobs of invalid accounts” has been set, printing will not be performed. To perform printing in any case, disable program “Cancel jobs of invalid accounts”. In this case, the number of printed pages will be accumulated to “OTHERS”.

The job control screen will always appear when print operation is executed from the printer driver if the “Auto Job Control review” check box in the “Main” tab of the printer driver is set.

USING THE MACHINE AS A POST-SCRIPT PRINTER

If an optional PS3 expansion kit (AR-PK1) is installed, this machine can be used as a PostScript compatible printer. The machine can be used in the Macintosh environment as well as in the Windows environment when used as a PostScript printer. In the Macintosh environment, however, the printer can be connected only through a network.

Using the printer in the Windows environment

To use this machine as a PostScript printer, the PostScript printer driver or the PPD files (PostScript Printer Description files) must be installed to your computer. For installation of the printer driver, use the PRINTER UTILITIES CD-ROM supplied with an optional PS3 expansion kit AR-PK1).

■Installing the PostScript printer driver

1 Insert the PRINTER UTILITIES CD-ROM of the PS3 expansion kit to a CD-ROM drive of your computer.

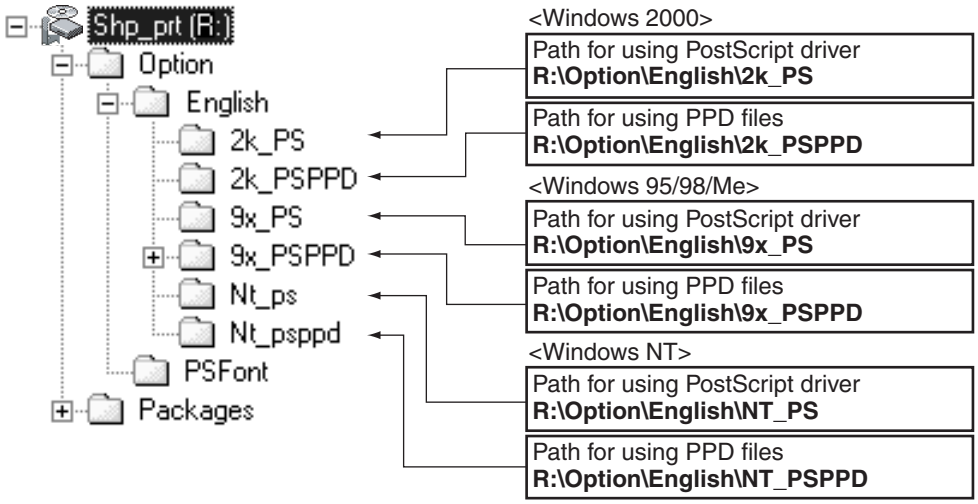
2 On the [Start] menu, click "RUN".

3 Enter the CD-ROM drive and setup command. Then click the [OK] button.
Example: If the CD-ROM drive is designated as drive R, enter "R:\SETUP.EXE".

4 Follow the instructions on the screen to install the desired software.

To install the PostScript printer driver using the "Add Printer" wizard in place of using the installer, enter the directory name of the file as follows. The directory names for PPD files are also shown in the illustration.

Directory information of the PS3 expansion kit PRINTER UTILITIES CD-ROM
(The CD-ROM drive is assumed to be drive R.)



■ Installing the PPD files (PostScript printer description files)
Insert the PRINTER UTILITIES CD-ROM of the PS3 expansion kit to a CD-ROM drive of your computer. The installation procedure is basically the same as the procedure described on page 2-4 that is performed by using the "Add Printer" wizard for installing a printer driver. The following items, however, are different.

- The PRINTER UTILITIES CD-ROM of a PS3 expansion kit is used.
- The path of the PPD files must be entered in step 7 on page 2-4. The path for each Windows version is shown below. (The CD-ROM drive is assumed to be drive R.)
  - Windows 2000
    R:\Option\English\2k_PSPPD
  - Windows 95/98/Me
    R:\Option\English\9x_PSPPD

  Windows NT
  R:\Option\English\NT_PSPPD
- When selecting the printer model in step 9 on page 2-4, select the PPD file name with your printer model.

■ **PS display font**

The PRINTER UTILITIES CD-ROM of a PS3 expansion kit contains PS display fonts. Install the PS display fonts as needed when the PostScript printer driver is installed. To install the PS display fonts, select it when installing the PostScript printer driver using the installer.

■ **Installing the resident font information for PPD (Windows 95/98/Me)**

After installing the PPD files, follow the procedure below to install the resident font information.

NOTES

- Before installing the resident font information, be sure to install the PPD files.
- When installing the resident font information, be sure to close all other open applications.
- When the printer is used as a network printer, if you have changed the port for the printer from Properties of the printer driver, reinstall the resident font information.

The screens in the Windows 98 environment are used below as examples.

1 **Start Windows.**

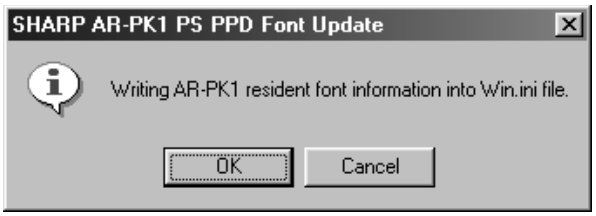
2 **Insert the PRINTER UTILITIES CD-ROM of a PS3 expansion kit into a CD-ROM drive.**

If your computer is configured for auto start on the CD-ROM, the package selection screen will appear. Click the [Cancel] button.

3 **On the [START] menu, click "RUN".**

4 **Enter the CD-ROM drive and "Option\English\9x_psppd\Pfmsetup.exe", and click the [OK] button.**

If the CD-ROM drive is designated as drive R, type "R:\Option\English\9x_psppd\Pfmsetup.exe" and click the [OK] button.
The following window will appear.



5 **Click the [OK] button.**

The following window will appear.

If the PPD files have not been installed, a message indicating it will appear and the resident font information cannot be installed.

6 **Click the [OK] button.**

7 **After installing the resident font, restart Windows.**

Installation of the resident font is complete.

Using the printer in the Macintosh environment

To use the printer in the Macintosh environment, the PPD files (PostScript printer description files) for Macintosh contained in the PRINTER UTILITIES CD-ROM of an optional PS3 expansion kit must be installed. The printer can be used as a PostScript compatible printer. The printer, however, must be connected to the computer through a network. An optional Print Server Card (AR-NC5J) is needed for network connection. Also the Macintosh computer must be equipped with an Ethernet port. If your computer is not equipped with an Ethernet port, install an Ethernet interface.

NOTE
If this printer is connected to the computer via a cross cable, be sure to turn on the Macintosh computer before turning on this printer. If not, the printer cannot be recognized as a network printer.

■ **PPD files**
The PPD files for Macintosh are the files which a Macintosh computer refers to when using its LaserWriter printer driver for printing.

■ **SHARP PPD Utility**
The SHARP PPD Utility is used to register account numbers and passwords when the auditing mode (page 6-7) or the job retention function with password (page 2-9) is used. This utility is also used to change the registered account numbers and passwords.

■ **Display fonts**
The PRINTER UTILITIES CD-ROM contains the display fonts for Macintosh. If you use the PPD files, install the display fonts as needed.

■ **Before installing the PPD files and the PPD Utility**
Before installing the software above, check the hardware and software requirements.

Computer:	Apple Macintosh series Apple Power Macintosh series
Operating system:	Mac OS 8.51 to 9.x
Printer driver:	LaserWriter 8 version 8.4.1 or later

For other conditions such as CPU and RAM capacity, requirements of the operating system must be satisfied.

Ensure that LaserWriter 8 has been installed in the Macintosh system. If not, install it from the system CD-ROM supplied with your Macintosh computer.

■ **Installing the utilities**

The screens in the Mac OS 9.0 environment are used below as examples. The display varies with the operating system and printer driver versions.

1 Turn on the computer and start the operating system.

2 Insert the supplied SHARP PS3 Expansion Kit AR-PK1 PRINTER UTILITIES CD-ROM into a CD-ROM drive.

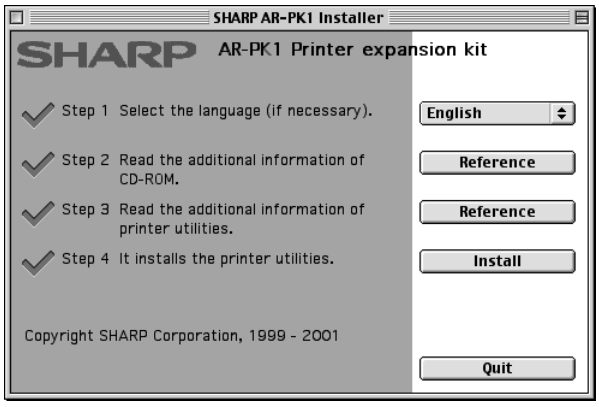
The AR-PK1 icon will appear on the desktop.

3 Close all other applications and double-click the AR-PK1 icon on the desktop.

The files contained in the CD-ROM will be displayed. The Printer Manual is not for this product.

4 Double-click the Installer icon.

The installer screen will appear.



5 Click [Reference] of steps 2 and 3 to read the text.

Be sure to read the descriptions, which contain information on use of this product as a printer.

6 Click the [Install] button of step 4.

The SHARP Installer dialog box will appear. Ensure that "Easy Install" is selected, select the drive, and click the [Install] button.

NOTES

- "Easy Install" is recommended.
- To cancel the installation, click the [Cancel] button.
- When uninstalling the PPD files from your computer, select "Custom Remove" on the installation type selection window, select the features to be removed, and click the [Remove] button.

7 After installation is complete, click the [Quit] button and remove the CD-ROM.

■ **Selecting the printer**

Follow the procedure below to select the printer.

1 Ensure that the printer is connected to the network to which your computer is connected.

2 Select the Chooser from the Apple Menu.

3 Click the LaserWriter 8 icon.

- The names of connected printers are displayed in the right hand box. If multiple AppleTalk zones are displayed, select the zone which includes the desired printer.

4 Select the desired printer.

- The default printer name of this product is "SCXXXXXX" (XXXXXX: 6 alphanumeric characters). The printer name can be changed by adjusting the setting for the Print Server Card (AR-NC5J).

5 Click 'Create', 'Setup' or 'Setup...'.

(Phrase depends on the version of MAC OS installed)

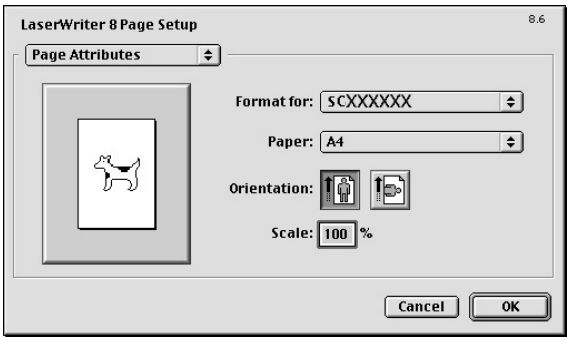
- If you are setting this printer for the first time:
  When the "Select a PostScript Printer Description File:" dialog box appears, select the PPD file name with your printer model name and click 'Select'.
- If you are setting this printer again:
  1) Click 'Auto Setup'.
  2) When the "Select a PostScript Printer Description File:" dialog box appears, select the PPD file name with your printer model name and click 'Select'.
  3) Click 'OK'.
     - Printer configuration will be automatically set.

6 Click the Close box to close the Chooser.

■ **Paper setting**

1 Select "Page Setup" from the [File] menu of application software.

The following display will appear. (The display varies with the operating system versions, printer driver versions, and application software.)



2 Adjust each setting.

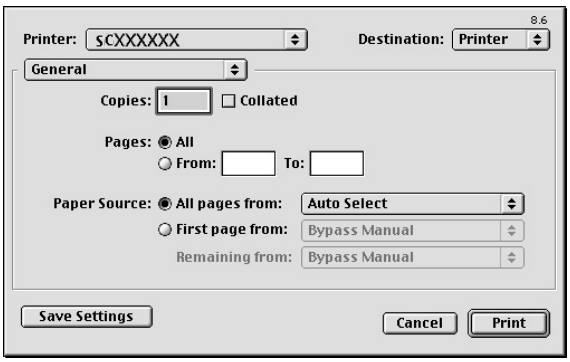
- Paper size, reduction/enlargement, and orientation can be set.

3 Click the [OK] button.

■ **Print condition setting**

1 Select "Print" from the [File] menu of application software.

The following display will appear. (The display varies with the operating system versions, printer driver versions, and application software.)



2 Adjust each setting.

Number of copies, page range, and other settings can be made.

If the printer has been configured for the auditing mode, an assigned 5-digit account number must be specified. To use the job retention with password, specify a five-digit password.

To specify an account number or a password for the job retention function, click "⬍" to the right of 'General' and select 'Job Control'.

- The account numbers used for printing are common to those for copying. The account numbers for printing must be registered to the computer using the PPD utility.

3 Click the [Print] button.

■ Installing the display fonts

The display fonts for Macintosh are contained in the Font folder of the AR-PK1 PRINTER UTILITIES CD-ROM. Install the display fonts as needed.

Copy the required display font files to the Fonts folder under the System folder of your computer.

NOTE
If any malfunction occurs due to the installation of display fonts, delete the fonts from the system.

■ Using the SHARP PPD Utility

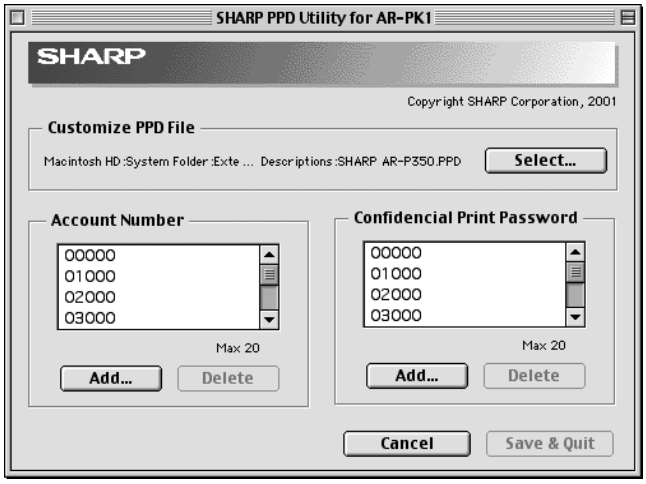
Before using the printer auditing mode or the job retention function with password from a Macintosh computer, you must use the PPD Utility to register account numbers and passwords. The PPD Utility is installed together with the PPD files using the installer for Macintosh contained in the SHARP PS3 Expansion Kit AR-PK1 PRINTER UTILITIES CD-ROM.

This utility allows up to 20 account numbers to be registered for the computer. The account numbers are the same as those for the copier auditing mode and must be registered using one of the key operator programs for the copier feature. When printing in the auditing mode, one of the registered account numbers must be specified on the screen used for setting print conditions. Also use this utility to change the registered account numbers.

When using the job retention function with password, a password must be specify when printing. This utility allows up to 20 passwords to be registered. One of the passwords must be specified when you set the print conditions.

To start this utility, select SHARP AR-PK1 Extras folder and then double click the PPD Utility icon.

NOTE
Do not use the AR230_270 PPD Utility. This utility is not for this model.



1 Click the [Select] button and select the PPD files for your printer.

2 To register an account number for the computer, click the [Add] button for Account Number. The Account Number screen will appear. Enter a 5-digit account number and click the [OK] button.

To delete a registered account number, select the account number in the box and click the [Delete] button.

3 To register a security password for the job retention function, click the [Add] button for Confidential Print Password. The Confidential Print Password screen will appear. Enter a 5-digit number in the box and click the [OK] button.

To delete a registered security password, select the password in the box and click the [Delete] button.

4 To save the registered account numbers and passwords and to exit the utility, click the [Save & Quit] button.

5 If the PPD file is changed using this utility, be sure to select the printer again through the Chooser. Use the procedure described in "Selecting the Printer" on page 2-17.

CHAPTER 3

PRINTER BASIC SETTINGS

This chapter describes the following items.

1. Printer configuration settings
2. Custom settings based on the customer's operating conditions.

Page

MAKING CONFIGURATION SETTING 3-2
- Operation procedure common to all printer configuration settings (items that can be set from the operation panel) 3-2
- Default settings 3-4
- PCL settings 3-5
- PostScript settings 3-5

CUSTOM SETTINGS 3-6
- Operation procedure common to all custom settings (items that can be set from the operation panel) 3-6
- Setting items 3-8

MAKING CONFIGURATION SETTING

The printer configuration setting allows basic printer settings to be made. The items set with the printer configuration settings are shown below.

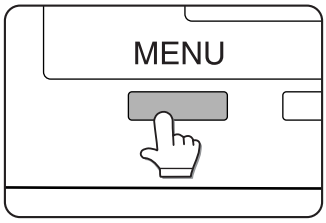
- Default settings ..... Basic settings used in printing (See page 3-4.)
- PCL settings ..... Sets a PCL symbol set. (See page 3-5.)
- PostScript settings* ..... Sets whether a PostScript error page is printed or not when a PostScript error has occurred. (See page 3-5.)

* An optional PS3 expansion kit is needed.

Operation procedure common to all printer configuration settings (items that can be set from the operation panel)

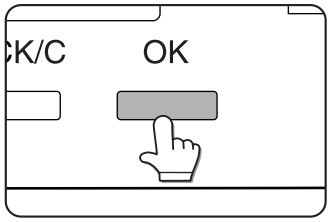
When the machine is being operated from the operation panel on the main unit:

1 Press the [MENU] key to display the configuration setting menu screen.

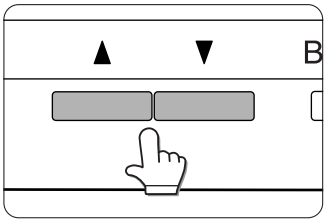


Press the [MENU] key repeatedly until "SET OPERATIONS CONDITIONS " appears.
Any print jobs held in the printer and any job currently transmitted to the printer will be printed in the former print conditions.

2 Press the [OK] key.



3 Press the ▲ or ▼ key to display the desired setting item.

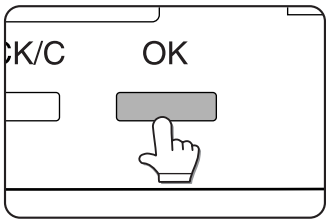


4 Press the [OK] key.

5 Press the ▲ or ▼ key to display the desired setting.

For the details of each setting item, see the description on and after page 3-4.

6 Press the [OK] key.



"∗" will be displayed to the right of the selected item and setting will be registered. To set another item, press the [BACK/C] key to return to step 3 and repeat the procedure to step 6.

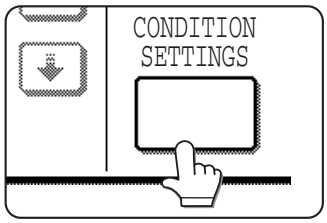
7 When setting is complete, press the [MENU] key to return to the basic screen.

NOTE

If the [BACK/C] key is pressed after each setting is complete, the display that has called the setting will appear again. If selection of a number is mistaken during setting operation, press the [BACK/C] key to correct the selected number.

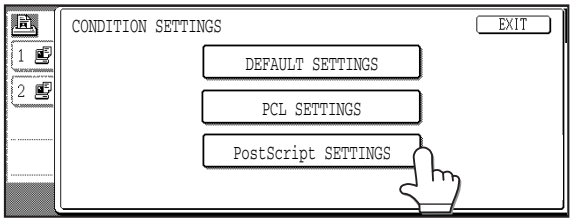
When the machine is being operated from the touch panel on a scanner module:

1 Touch the [CONDITION SETTINGS] key on the printer screen to display the configuration setting menu screen.



Any print jobs held in the printer and any job currently transmitted to the printer will be printed in the former print conditions.

2 Touch the key of the desired item to display its setting screen.

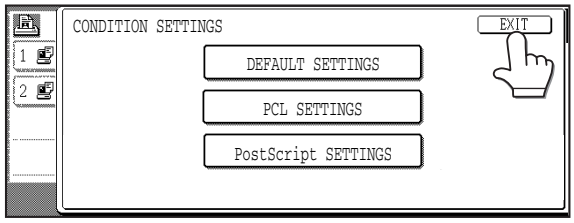


Detailed descriptions for configuration setting start on the next page.

3 Touch the desired setting on the setting screen of the desired item and touch the [OK] key.

To set another item, repeat steps 2 and 3.

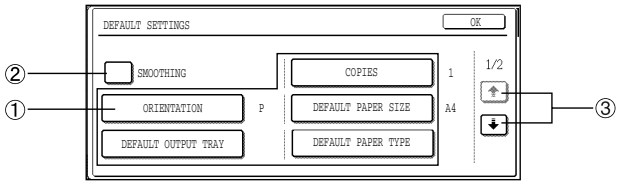
4 To finish the setting operation, touch the [EXIT] key.



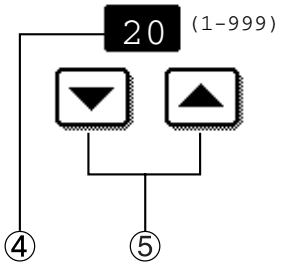
3

Supplementary explanation of key operation for configuration setting

(when using the touch panel)



These keys and indicator are available on setting screens that require the entry of numerical values.



① The name of the configuration category or particular item to be set will appear on the touch key. A touch of the key will select the item displayed.

② Check mark boxes are touch keys that show the status of selections. A box with a check mark means the function is “on” (enabled) and an unchecked box means the function is “off” (disabled). Alternate touches of a box will change the on/off status.

③ If a configuration step requires more than one screen to display all available settings for a configuration step, [▲] and [▼] arrow touch keys on the setting screens allow access to the available selections on all screens. If a selection is accepted on one of the screens by a press of the [OK] key, the display will return through the previous selection screens within the same setting step to confirm the settings. After all settings are confirmed, the [OK] key must be pushed again to advance to the next step.

④ The currently set numerical value is displayed.

⑤ Numerical values can be set by touching the [▲] and [▼] keys.

Default settings

The default settings allow detailed print conditions to be set for printing without any printer driver (for example, printing from MS-DOS and printing from a computer without any printer driver installed). The setting items are shown below.

NOTE

When some items can be set both in the printer driver and on the operation panel, the values set in the printer driver override those set on the operation panel. For items that can be set in the printer driver, perform setting in the printer driver.

■ Smoothing

SMOOTHING reduces jaggies seen at roundish curved portions of characters and images to be printed and improves pseudo resolution.

Default setting: On

Smoothing on or off can be selected.

■ Copies

COPIES is set when the number of copies to be printed is set.

Default setting: 1

The number of copies can be set from 1 to 999.

■ Orientation

ORIENTATION allows portrait orientation or landscape orientation to be selected for printing.

Default setting: PORTRAIT

PORTRAIT or LANDSCAPE can be set.

■ Default paper size

The paper size to be used for printing in the normal conditions is set.
Printing will be performed onto the specified size paper unless otherwise specified.

Default setting: 8-1/2 x 11 or A4

11 x 17, 8-1/2 x 14, 8-1/2 x 13, 8-1/2 x 11, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2, A3, B4, A4, B5 or A5 can be set.
(If the operation panel on the main unit is used, the sizes are displayed as follows in the display: LEDGER, LEGAL, FOOLSCAP, LETTER, EXECUTIVE, INVOICE, A3, B4, A4, B5, and A5.)

■ Default paper type

The paper type to be used for printing in the normal conditions is set.
Printing will be performed onto the specified type paper unless otherwise specified.

Default setting: PLAIN

Plain paper, pre-printed paper, recycled paper, transparency film letter head paper, pre-punched paper or color paper can be set.

■ Default output tray

The output tray to be used for printing in the normal conditions is set. Printed sheets will be output to the specified tray unless otherwise specified by application software.

Default setting: Depends on installation of peripheral devices.

The trays that can be selected depend on installation of peripheral devices. This item itself may not be selected.

■ 2-SIDED PRINT

Printing mode, 1-SIDED or 2-SIDED, to be used for printing in the normal condition is set.
This key can not be selected on the printer without the duplex module.

Default setting: 1-SIDED

1-SIDED, 2-SIDED (BOOK) or 2-SIDED (TABLET) can be set.

■ Line thickness

This setting is used to adjust the line width of vector graphics. For example, if you desire a finer line, select a value from 0 to 4. If you desire a thicker line, select a value from 6 to 9. To return to the standard line thickness, select 5. Use this setting for special applications such as CAD when lines do not appear with sufficient clarity. For regular applications, there is usually no need to change the setting.

Default setting: 5

The relation between the setting values and the change of line thickness are as follows.

Value	0	1	2	3	4	5	6	7	8	9
Thickness change	1 dot *1	50%	75%	90%	95%	100%	105%	110%	125%	150%

*1 All lines are 1-dot lines.

■ Extra print mode

When you have a large number of single print jobs, this setting can be used to shorten the waiting time between print jobs and increase efficiency. Normally there is no need to turn this setting on.
When this setting is turned on, multiple single print jobs are displayed in the Job status screen as one print job. Note that the "Notify Job End" function does not operate (even if turned on) when Extra print mode is turned on.

When turned on, Extra print mode combines single print jobs into one print job. However, if any of the print jobs are as described in A or B below, Extra print mode will turn off or stop functioning.

A. One of the following print conditions change between print jobs:

Two-sided printing to one-sided printing / one-sided printing to two-sided printing / binding method of two-sided printing / orientation of two-sided printing / paper type / output tray / toner save / smoothing / binding position / binding width / halftone *1

*1 An optional PS3 expansion kit is needed.

B. One of the following print modes is selected for a print job:

Account control / Two or more copies / Job retention *2 / Saddle stitch / Staple / Punch / Different first page / Transparency inserts

*2 An optional hard disk drive must be installed.

PCL settings

PCL SETTINGS is used to assign a part of character codes to characters of a country in the PCL symbol set. (Used when different symbols are used depending on the country.)

Default setting: “1” (Roman-8)

For setting items of the symbol set, see page 7-6.
The list of the numbers to be set and their corresponding symbol sets can be printed using “PCL symbol set list printing” (see page 3-8).
When using the operation panel on the main unit, select the desired symbol set item and register it. When using the operation panel with touch panel, select the number that corresponds to the desired symbol set and register it.

PostScript settings

This setting specifies whether an error page describing the cause of an error is printed or not when a PostScript error has occurred.
Selections are available to choose printing or not printing of error pages.

Default setting: Not print

CUSTOM SETTINGS

Custom settings are used for various settings based on the customer operating conditions. The items that can be set with the custom settings are shown below.

- Total count ..... The number of printed pages and the like are displayed. (See page 3-8.)
- Display contrast*1 ..... The display contrast of the operation panel is adjusted. (See page 3-8.)
- List print ..... Used to print a list of settings that have been made or a font list. (See page 3-8.)
- Clock ..... The date and time of the built-in clock of the printer are set.
- Tray settings ..... The paper type and paper size for each tray are set.
- Auto tray switching ..... Used to switch automatically the paper tray of the same paper size when paper runs out in continuous printing.

For the items below, detailed setting procedure is described in the facsimile operation manual.

- Address control*3 ..... Used to register destination E-mail addresses, fax numbers, and Internet fax addresses. Also group entry, memory box entry, custom index entry, and scanner sender entry can be set.
- Receive mode*2 ..... The fax receive mode (automatic or manual) is set.
- Fax data forward*2 ..... Received fax data in memory can be forwarded to another destination.

- Key operator programs ..... Setting programs are provided for key operators (administrators of this machine). If this product is equipped with a scanner module, this key will appear in the CUSTOM SETTINGS menu screen. For settings, see page 6-1.

*1 Can be set if this product is equipped with a scanner module.

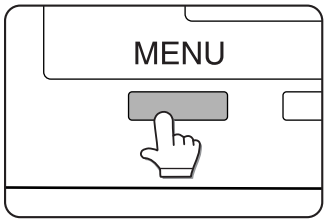
*2 Can be set if this product is equipped with a scanner module and the facsimile feature can be used.

*3 Can be set if this product is equipped with a scanner module and the facsimile feature or the network scanner feature can be used.

Operation procedure common to all custom settings (items that can be set from the operation panel)

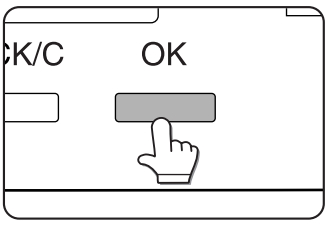
When the machine is being operated from the operation panel on the main unit:

1 Press the [MENU] key to display the custom settings menu screen.

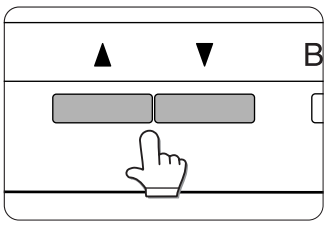


Press the [MENU] key repeatedly until the message "CUSTOM SETTINGS" appears.
Any print jobs held in the printer and any job currently transmitted to the printer will be printed in the former custom setting conditions.

2 Press the [OK] key.



3 Press the ▲ or ▼ key to select the desired setting item.

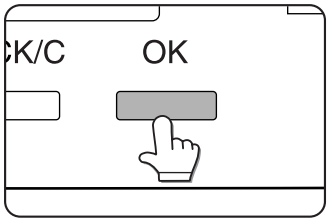


4 Press the [OK] key.

5 Press the ▲ or ▼ key to select the desired setting.

For details of each setting item, see the description on page 3-8.

6 Press the [OK] key.



"∗" will be displayed to the right of selected item, and the setting will be registered. Depending on the setting item, additional item selection and registration operation may be needed. In this case, use the ▲ or ▼ key to select an item and press the [OK] key to register it. To set another item, press the [BACK/C] key and repeat steps 5 and 6.

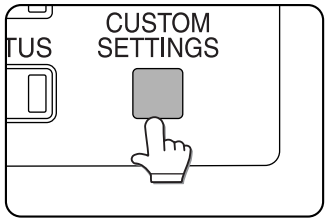
7 When setting is complete, press the [MENU] key to return to the basic screen.

NOTE

If the [BACK/C] key is pressed after each setting is complete, the display that has called the setting will appear again. If selection of a number is mistaken during setting operation, press the [BACK/C] key to correct the selected number.

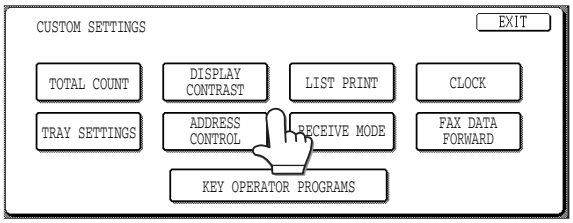
When the machine is being operated from the touch panel on a scanner module:

1 Press the [CUSTOM SETTINGS] key when the printer screen is displayed to display the custom settings menu screen.

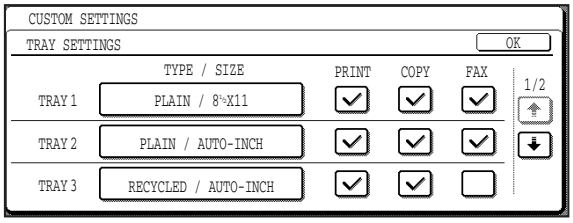


Any print jobs held in the printer and any job currently transmitted to the printer will be printed in the former custom setting conditions.

2 Touch the key of the desired item to display its setting screen.

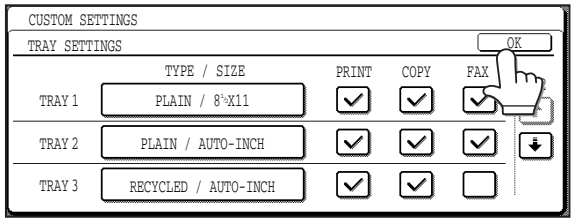


Detailed descriptions for custom settings start on the next page.



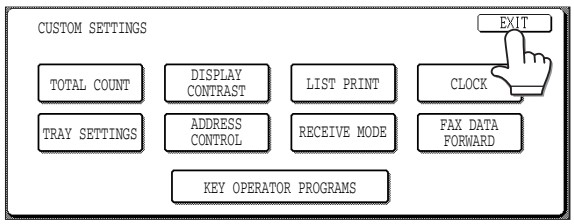
Depending on the setting item, additional item setting keys may be displayed and page switching keys may be displayed.
Check mark boxes are touch keys that show the status of selections. A box with a check mark means the function is "on" (enabled) and an unchecked box means the function is "off" (disabled). Alternate touches of a box will change the on/off status.

3 Touch the desired setting on the setting screen of the desired item and touch the [OK] key.



To set another item, repeat steps 2 and 3.

4 To finish the setting operation, touch the [EXIT] key.



Setting items

■ Total count

The number of total printed pages in this product can be displayed and printed.
If the product is equipped with an optional scanner to include copying and facsimile functions, the number of copies made and facsimile images sent can also be displayed or printed.

■ Display contrast

Can be set if this product is equipped with a scanner module.
This item is used to adjust the contrast of the touch panel display.

■ List print

Test pages such as a list of setting items configured in this product and a list of the resident fonts for checking can be printed.
The types of test pages are shown below.

- ● All custom setting list
  The settings in the printer feature (condition settings and custom settings) are printed. The key operator program settings are not printed.
- ● Printer test page
- • PCL font list printing: A list of fonts that can be used with the PCL printer drivers is printed.
- • PCL symbol set printing: A PCL symbol set list is printed.
- • NIC page printing: A list of settings used by the NIC (Network Interface Card), namely the print server card, is printed.
- • PostScript font list printing: A list of fonts that can be used with the PostScript printer driver is printed.
- • Option font list printing: A list of option fonts (AR-PF1) is printed.

NOTE

If test page printing is disabled with key operator program “DISABLE TEST PAGE PRINTING” (page 6-11), the printer test pages cannot be printed.

■ Clock

The date and time of the built-in clock of this product are set. These settings will be used for the functions that require date and time information.

■ Tray settings

Paper type, paper size, operation mode, and use of automatic tray switching are set for each tray.
For details on setting the paper type and paper size, see pages 1-19 and 1-20.
“Operation mode” means copy, print or fax mode. Use of a paper tray is set for each mode. This setting is available when the machine is operated from the touch panel on a scanner module.
When the machine is being operated from the operation panel on the main unit, use the item “Auto tray switching” described below for setting the automatic tray switching function.

■ Auto tray switching

If the auto tray switching function is set and more than one tray of the same paper size is installed in this product, printing can be continued by switching automatically the paper tray when paper of a tray runs out. This item is used to enable the auto tray switching function. When the machine is operated from the touch panel on a scanner module, use the item “Tray settings” to set this function.

CHAPTER 4

TROUBLESHOOTING AND MAINTENANCE

This chapter describes misfeed removal, user maintenance, etc.

Page

MISFEED REMOVAL 4-2
- ● General misfeed removal procedure 4-2
- ● Misfeed removal guidance 4-3
- ● Misfeed in the paper feed area 4-4
- ● Misfeed in the transport area, fusing area, and exit area 4-6
- ● Misfeed in the duplex module 4-7

TROUBLESHOOTING 4-8

USER MAINTENANCE 4-11
- ● Cleaning the scanner module 4-11

MISFEED REMOVAL

When the machine is being operated from the operation panel on the main unit:

- If the machine is not equipped with a scanner, all messages will appear on the display panel of the main unit. For machines equipped with a scanner, messages will appear on the touch panel display on the scanner module.

When a misfeed has occurred, printing will stop and the message shown below will appear. Follow the procedure below to remove misfed paper.

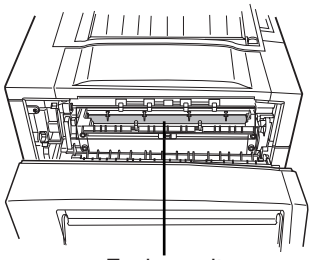
```
PAPER JAM.
                [i]
```

NOTES

- Do not damage or touch the photoconductive drum. (See pages 1-5 and 4-6.)
- Be careful not to tear the misfed paper during removal.
- If paper is accidentally torn during removal, be sure to remove all pieces.

⚠CAUTION

The fusing unit is hot. Take care in removing paper.

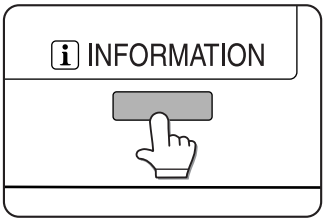


Fusing unit

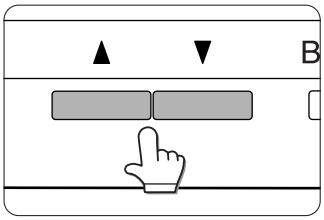
General misfeed removal procedure

If the INFORMATION key is pressed when a misfeed has occurred, messages will appear giving guidance for misfeed removal. The messages will appear in sequence and can be viewed by using the ▲ and ▼ keys.

1 Press the INFORMATION key.



2 Press the ▼ key.



Use the ▲ or ▼ keys on the operation panel to scroll through the guidance messages.

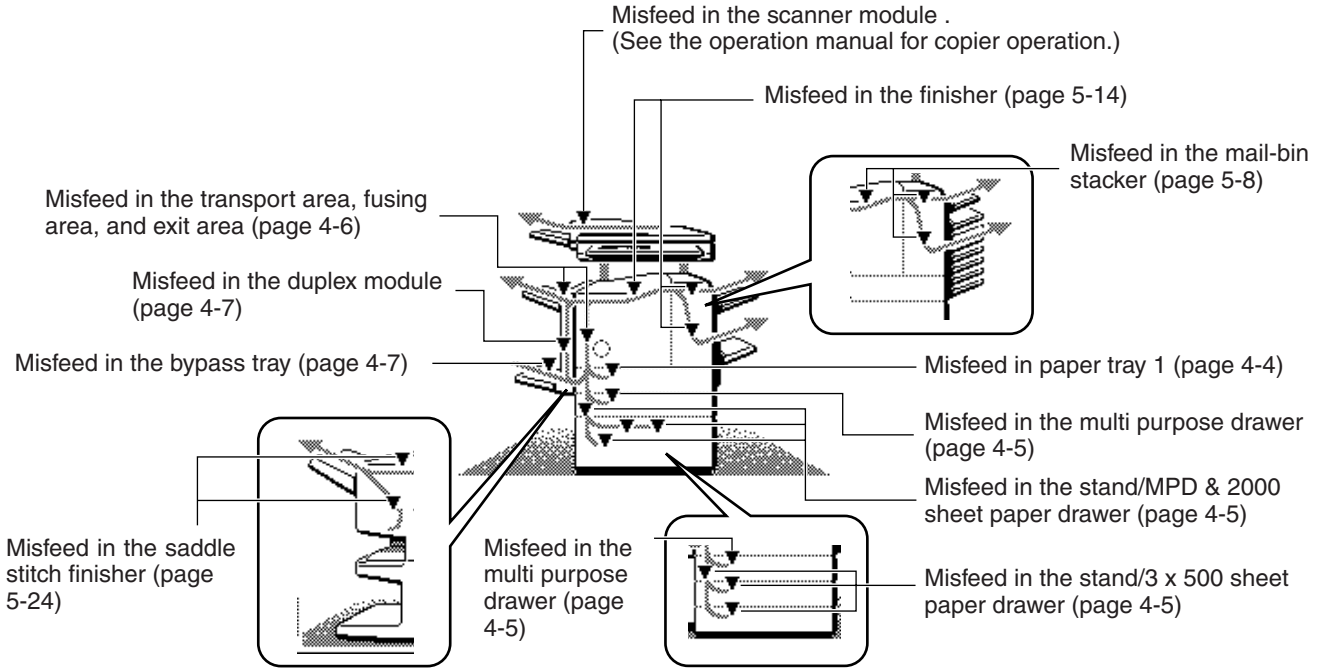
The messages in the table below provide guidance for misfeed removal. For more detailed guidance refer to the pages indicated in the table.

Message	Page
PULL OUT TRAY * AND CHECK THE PAPER.	4-4
OPEN THE LOWER LEFT COVER.	4-5
OPEN THE LEFT COVER.	4-6
REMOVE PAPER FROM BYPASS TRAY.	4-7
OPEN THE DUPLEX COVER.	4-7
OPEN THE MAIL-BIN COVER.	5-8
OPEN THE CENTER COVER.	5-8,5-14
OPEN THE FINISHER TOP COVER.	5-14, 5-24
SLIDE THE FINISHER AWAY FROM MACHINE.	5-24
OPEN THE FINISHER FRONT COVER.	5-24

3 Press the INFORMATION key to close the misfeed removal guidance.

When the machine is being operated from the touch panel on a scanner module:

When a misfeed has occurred during printing, the message "A MISFEED HAS OCCURRED." will appear in the touch panel display of the operation panel and printing including copying and facsimile output will stop. The approximate misfeed locations are indicated with "▼" shown in the illustration below. The page numbers for detailed information on misfeed removal are also shown.



NOTES

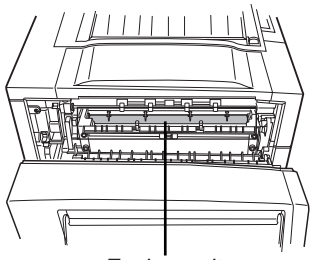
- Facsimile reception data is always temporarily stored in memory. After misfed paper is removed, any received data in memory will be automatically printed.
- If the machine is performing a scanning operation, vibrations resulting from hard operation of machine covers or trays during misfeed removal will cause uneven scanning. Also if a hard disk drive unit is installed, it may malfunction due to vibration.

NOTES

- Do not damage or touch the photoconductive drum. (See pages 1-5 and 4-6.)
- Be careful not to tear the misfed paper during removal.
- If paper is accidentally torn during removal, be sure to remove all pieces.

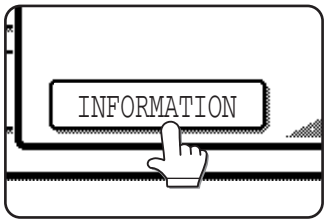
⚠CAUTION

The fusing unit is hot. Take care in removing paper.



Misfeed removal guidance

Misfeed removal guidance can be displayed by touching the INFORMATION key on the touch panel after a misfeed has occurred.

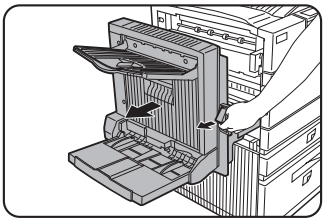


Misfeed in the paper feed area

NOTE
Be sure to follow the misfeed removal sequence. Do not pull the paper tray out first as paper may be located between the paper tray and the paper feed section. If the tray is pulled first, the misfed paper may be torn and difficult to remove. The following procedure shows the removal sequence when the machine is equipped with a duplex module. If the machine is not equipped with a duplex module or any output device, the procedure is basically the same. The left side of the machine must be opened and cleared before the paper tray is pulled out.

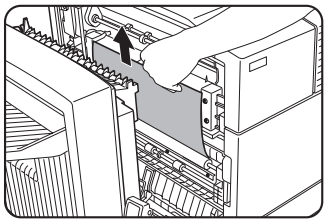
■ Misfeed in paper tray 1

1 Unlatch the duplex module and slide it to the left.



Unlatch the module and gently move the module away from the machine.
If the machine is not equipped with a duplex module, open the side cover similarly.

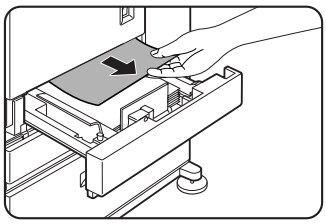
2 Remove the misfed paper.



Be careful not to tear the misfed paper during removal.

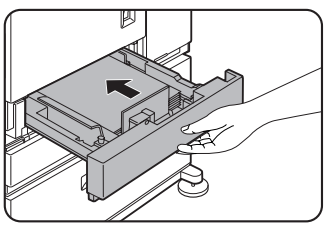
NOTE
The paper may not be extending out far from inside the machine but must be removed if it is possible to grasp it. If it is not possible to grasp it, go to the next step.

3 If misfed paper is not found in step 2, pull out paper tray 1 and remove the misfed paper.



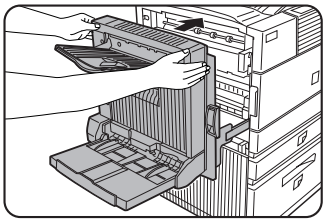
Be careful not to tear the misfed paper during removal.

4 Gently close the paper tray.



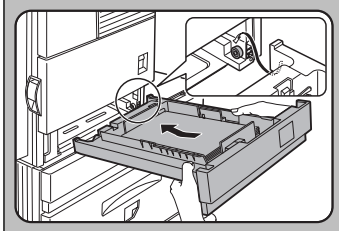
Push the paper tray back into the machine.

5 Gently close the duplex module.



If the machine is not equipped with a duplex module, close the side cover.
After closing, confirm that the misfeed message has been cleared and the normal display appears.

NOTE
If paper drops beyond the rear side of the paper tray that has been pulled out, remove the paper tray and then remove the paper. (For removal of the paper tray, see the illustration below.)



After pulling out the paper tray until it stops, gently lift and pull the tray to remove it. To reinstall the paper tray, insert it at an angle and then push it into the machine.

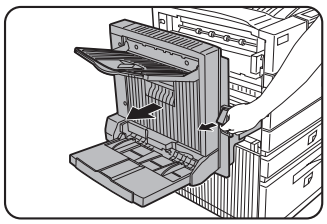
To remove a paper tray from a stand/paper drawer, pull the tray out until it stops then rotate it to the left to disengage it from the stand. When reinstalling it, place the left rear of the drawer into the slot and rotate the drawer to the right and into the stand.

Installation of trays in the stand/3x500 sheet paper drawer

The middle and lower trays cannot be installed in the upper tray position and the upper tray cannot be installed to the middle and lower tray positions. (These cannot be pushed into the machine.)
Take care not to install a tray to an improper position after removing the tray.

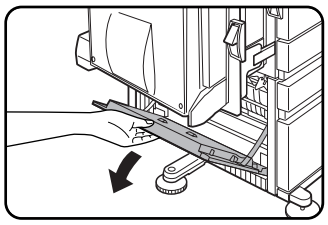
■ **Misfeed in the multi purpose drawer**

1 Unlatch the duplex module and slide it to the left.



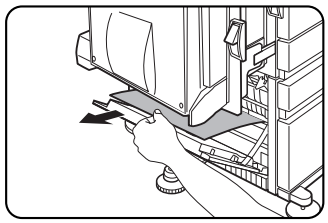
Unlatch the module and gently move the module away from the machine.
If the machine is not equipped with a duplex module, open the side cover similarly.

2 Open the left cover of the stand/paper drawer.



Hold the knob and gently open the cover.
If the machine is not equipped with a stand/paper drawer, open the left cover of the multi purpose drawer.

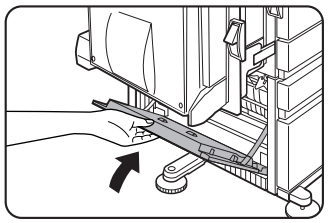
3 Remove the misfed paper.



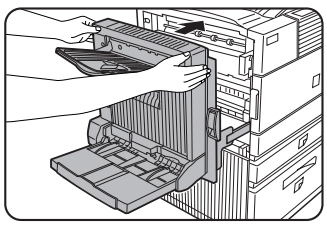
Be careful not to tear the misfed paper during removal.

NOTE
The paper may not be extending out far from inside the machine but must be removed if it is possible to grasp it. If it is not possible to grasp it, go to the next step.

4 Close the left cover of the stand/paper drawer.



5 Gently close the duplex module.



If the machine is not equipped with a duplex module, close the side cover.
After closing, confirm that the misfeed message has been cleared and the normal display appears.

6 If misfed paper is not found in step 3, refer to "Misfeed in paper tray 1" (steps 1 to 5 on the previous page) to remove the misfed paper.

■ **Misfeed in the stand/3 x 500 sheet paper drawer**

For misfeed removal in the upper tray, follow the procedure of "Misfeed in the multi purpose drawer" shown to the left to remove the misfed paper.

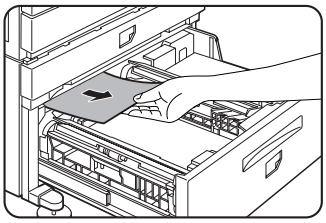
■ **Misfeed in the stand/MPD & 2000 sheet paper drawer**

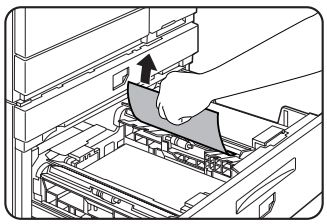
For misfeed removal in the upper tray, follow the procedure of "Misfeed in the multi purpose drawer" shown to the left to remove the misfed paper. For misfeed removal in the lower large capacity tray, follow the procedure below.

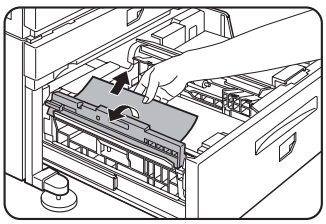
1 Follow steps 1 to 4 of "Misfeed in the multi purpose drawer" shown to the left.

2 If misfed paper is not found in step 1, refer to "Misfeed in paper tray 1" on the previous page.

3 If misfed paper is not found in steps 1 and 2, pull out the large capacity tray (lower tray) and remove the misfed paper as shown in the illustrations below.

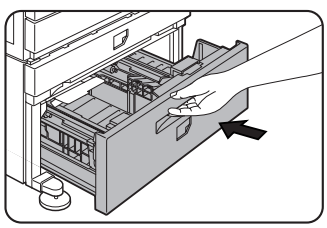






Raise the paper guide and remove the misfed paper.
After removing the misfed paper, be sure to return the paper guide.

4 Gently close the large capacity tray.



Push the paper tray all the way into the machine.

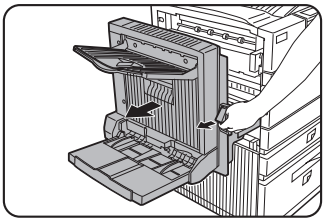
5 Gently close the duplex module.

If the machine is not equipped with a duplex module, close the side cover.
After closing, confirm that the misfeed message has been cleared and the normal display appears.

Misfeed in the transport area, fusing area, and exit area

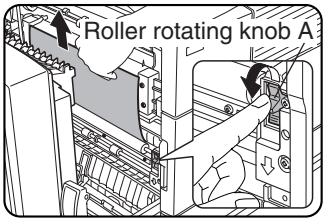
CAUTION
The fusing unit is hot. Take care in removing paper. (Do not touch the metal parts.)

1 Unlatch the duplex module and slide it to the left.



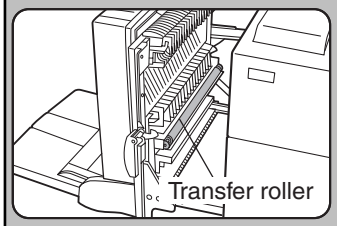
Unlatch the module and gently move the module away from the machine. If the machine is not equipped with a duplex module, open the side cover similarly.

2 Remove the misfed paper as shown in the illustrations below.

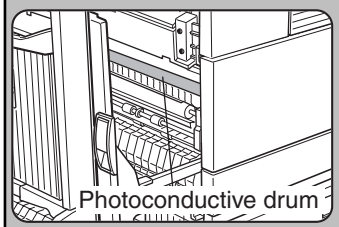


If paper is misfed in the transport area, turn roller rotating knob A in the direction of the arrow to remove the misfed paper.

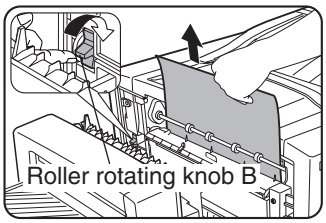
NOTE



Do not touch or damage the transfer roller.

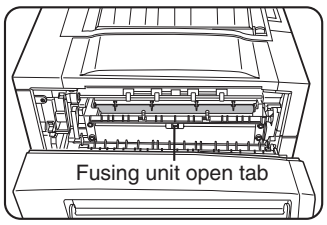


Do not touch or damage the photoconductive drum.

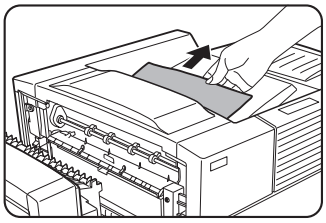


If paper is misfed in the fusing area, turn roller rotating knob B in the direction of the arrow to remove the misfed paper.

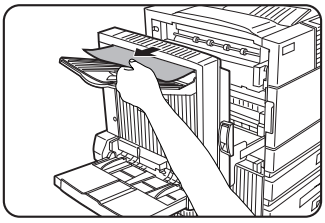
CAUTION
The fusing unit is hot. Take care in removing paper. (Do not touch any metal parts.)



If the misfed paper is inside the fusing area, turn down the fusing unit open tab to open the fusing unit and remove the misfed paper.

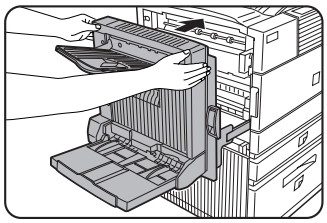


If paper is misfed in the exit area, remove it as shown while taking care not to tear the paper.



If the duplex module is equipped with an exit tray and paper is misfed in the exit area, remove the misfed paper as shown in the illustration.

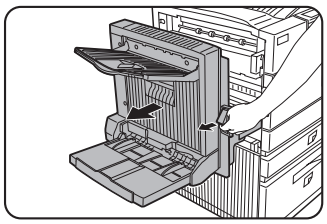
3 Gently close the duplex module.



If the machine is not equipped with a duplex module, close the side cover.
After closing, confirm that the misfeed message has been cleared and the normal display appears.

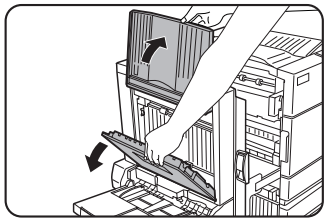
Misfeed in the duplex module

1 Unlatch the duplex module and slide it to the left.



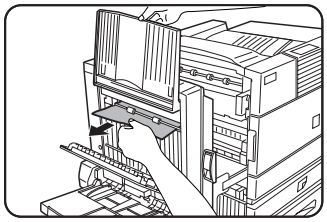
Unlatch the unit and gently move the module away from the machine.

2 If the duplex module has an exit tray, rotate it up out of the way and open the cover of the duplex module.

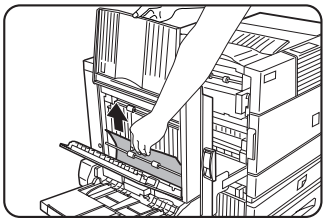


If no exit tray is attached, just open the cover of the duplex module and ignore any reference to the tray in the following steps.

3 While holding the exit tray up, remove the misfed paper as shown in the illustrations below.

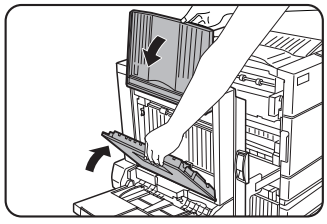


If paper is misfed at the upper part of the duplex module, gently remove it while taking care not to tear the paper.

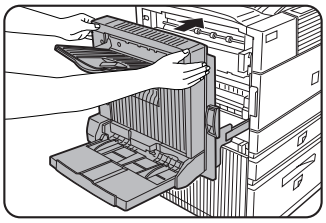


If paper is misfed at the lower part of the duplex module, gently remove it while taking care not to tear the paper.

4 Close the cover of the duplex module and lower the exit tray.



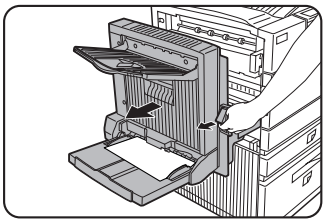
5 Gently close the duplex module.



After closing the duplex module, confirm that the misfeed message has been cleared and the normal display appears.

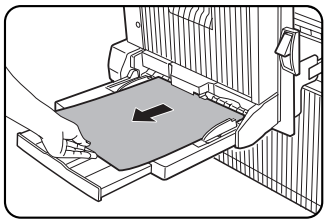
■ Misfeed in the bypass tray

1 Unlatch the duplex module and slide it to the left.

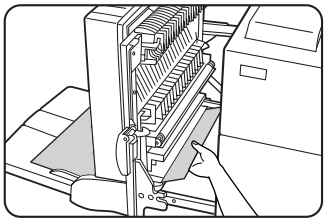


Unlatch the unit and gently move the module away from the machine.

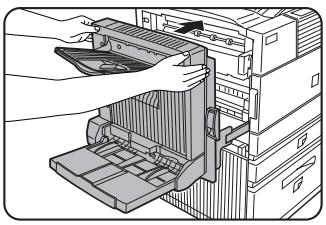
2 Remove the misfed from the bypass tray.



Be careful not to tear the misfed paper during removal.



3 Gently close the duplex module.



After closing the duplex module, confirm that the misfeed message is cleared and that the normal display appears.

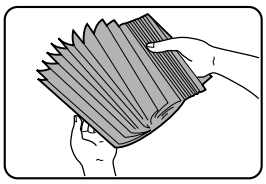
TROUBLESHOOTING

Whenever the printer stops or operation is not possible, check the operation panel display for messages. In most cases these messages will give sufficient information to return the machine to an operating condition. In cases where this information is not enough, check the list below for more information.

This section describes problems concerning printer features. For troubleshooting specific problems related to copier, facsimile, or network scanner features, see the separate manuals provided for them. For problems related to peripheral devices, see chapter 5 of this manual.

Problem	Check	Solution or cause
Printer does not operate.	● Printer plugged in?	Plug the printer into a grounded outlet.
	● Main power switch on?	Turn on the main power switch.
	● READY indicator off?	The printer is warming up. (Warm-up time is approximately 80 seconds.) Wait until the READY indicator lights up.
	● Message indicating need to load paper displayed?	Load paper. (page 1-16)
	● Message indicating need to replace the toner cartridge displayed? (ERROR indicator lit at the same time on the operation panel of the main unit?)	Replace the toner cartridge. See the separate "Operation manual (Read this document before installing the product.)."
	● Message indicating a paper misfeed displayed? (ERROR indicator lit at the same time on the operation panel of the main unit?)	Remove misfed paper. (page 4-2)
Printer is on but data is not received.	● Is the correct interface cable properly connected between the printer and your computer?	Ensure that the correct interface cable is connected between the printer and your computer. (page 2-2)
	● Is the correct printer driver installed?	Install the appropriate printer driver. (page 2-3)
	● Has the printer been selected properly in the application software or, when the printer is being used as a network printer, has it been properly registered on the network?	Ensure that this printer is selected on the application software or use an appropriate utility to check that the printer is registered on the network.
Data is received but not printed.	● Is paper of the specified and type loaded in the printer?	Load paper, select another paper size or cancel printing.
Printer cannot be selected from computer.	● Is the printer driver installed correctly?	Install the printer driver correctly. (page 2-3)
The orientation of the image is incorrect on the print.	● Is the orientation setting in the printer driver correct?	Correct the orientation in the printer driver.
Image loss has occurred. The image is larger than the paper.	● Zoom printing?	Check the zoom setting in the driver.

Problem	Check	Solution or cause
Black pages	● Is a color on color image being printed?	Some color on color images may be printed as all black.
Black and white areas are reversed.	● Negative image printing?	Check print driver setting.
Printer prints in reverse order.	● Is the reverse order selected in the application software?	Cancel the reverse order printing in the application software.
Printer stops in the middle of a print job.	● Too much paper in the exit tray?	Remove the paper from the exit tray.
	● Is the printer out of paper?	Load paper.
Printing is not on desired paper size.	● Is paper selection of driver "Auto"?	Ensure that the desired paper is set in a paper tray of the printer and select "Auto" in the paper selection of the printer driver.
Printer resident font cannot be selected from the application software when the PPD file of an optional PS3 expansion kit is used in Windows (except NT) environment.	● Has the resident font information been installed?	Install (or reinstall) the resident font information. (page 2-14)
Printer write error occurs when printing from the parallel port.	● Is the timeout time set to be too short in the printer driver?	Set a longer time in the timeout setting in the printer driver.
Only one set has been output when more than one set has been specified.	● Is the size of the file being printed too large for the available memory? Check for a printed notice page.	The print file size exceeds storage capacity of this printer. Print additional sets one at a time. Installation of a hard disk drive will enable printing of larger size files.
Two-sided printing is specified but only a notice page is printed.	● Two-sided printing of a large number of pages is specified?	The print file size exceeds storage capacity of this printer. Installation of a hard disk drive will enable printing of large size files.
Printed image is too light or too dark.	● Is the exposure control set properly?	The printer exposure level can be adjusted by using a key operator program. Contact your key operator. (page 6-11)

Problem	Check	Solution or cause
Smudges on printed sheets	● Is a message indicating a need of maintenance or replacement of developer cartridge displayed ([ERROR] indicator on the main unit operation panel lit)?	See the Operation Manual (Read this document before installing the product.).
Cannot select the desired paper in the printer driver or on the copier operation panel.	● Has the paper size and type been set from the operation panel on the printer?	Be sure to set the paper size referring to "Setting the paper size and type" when you change the paper size in tray 1. (page 1-19)
Paper misfeeds frequently.	● Paper curled or damp?	Do not use curled or crimped paper. If you do not use paper for a long time, store paper in the wrapper in a dry location.
	● Paper curled and misfed in the duplex module or finisher?	Paper may be curled when output depending on the paper type and quality. In some cases turning the paper over in the tray will reduce misfeeding due to curling.
	● Multiple sheets of paper fed simultaneously?	 Remove the paper from the paper tray or the bypass tray, fan the paper as shown in the illustration, and then load it again.
Printed paper is wrinkled or the image rubs off easily.	● Is paper size or weight out of the allowable range?	Use paper in the allowable range.
	● Paper damp?	Be sure to store paper in the wrapper in a dry location and do not store paper in a location that is ● humid ● at a high temperature or an extremely low temperature.
The contrast on the touch panel is too high or too low.	● Is LCD contrast properly adjusted?	Adjust the contrast using "DISPLAY CONTRAST" of custom settings. (page 3-8)
A notice page is printed when a print job is sent to the printer for retention.	● Has the number of jobs reached the maximum of 100 jobs in retention?	No further jobs can be retained until some jobs already in retention are deleted.
Password entry is requested.	● Password set in the retention function?	Password is needed when executing printing. If the password is not known, printing cannot be executed.
Priority of reserved print jobs cannot be changed.	● Has the paper to be used run out?	Load paper. (page 1-16)
	● Exit tray full?	Remove paper from the exit tray if it is full.

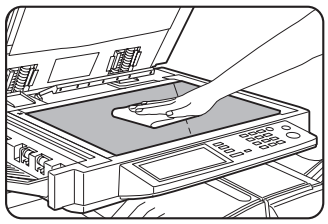
USER MAINTENANCE

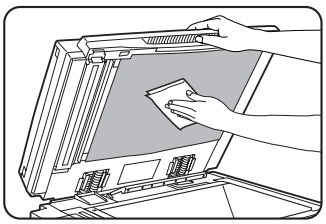
To ensure good service from this product over a long period of time, it is recommended that the following maintenance be performed on a regular basis.

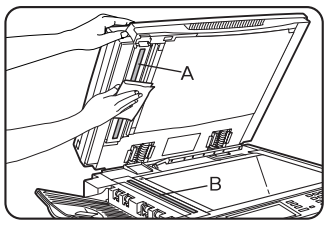
NOTE
When cleaning, do not use thinner, benzene, or similar volatile cleaning agents.

Cleaning the scanner module

If the document glass, DSPF scanning section glass or document cover have dirty spots, these spots will become part of scanned images. These will show up as defects when the images are printed. Clean these areas by wiping them with a soft, clean cloth dampened with water or a small amount of a neutral detergent and then wipe them dry.

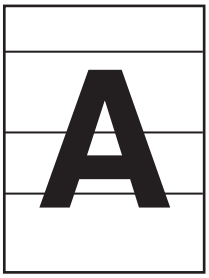




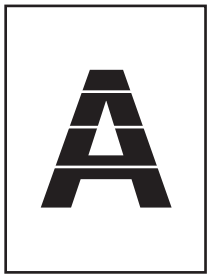


If black or white stripes appear on printed images of originals that were fed through the DSPF, wipe the scanning section glasses shown as A and B in the illustration.

Black stripes



White stripes



CHAPTER 5

PERIPHERAL DEVICES

This chapter describes operating instructions for the Mail-Bin Stacker, the Finisher, the Saddle Stitch Finisher, and the Duplex Module.

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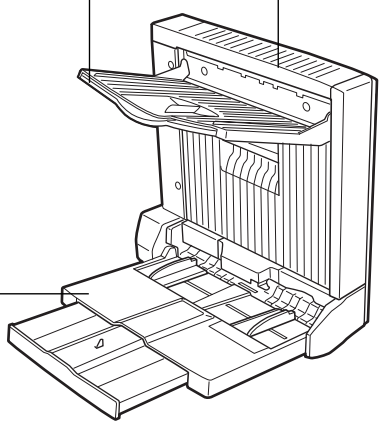
DUPLEX MODULE

If a duplex module is installed, printing onto both sides of paper can be performed.
Two types of duplex modules are available: duplex module/bypass tray and duplex module. The descriptions in this manual are for the duplex module/bypass tray. For misfeed removal for these modules, see page 4-7.

Part names

Exit tray
The tray is extendable to support large size paper. Extend the tray when 11" x 17", 8-1/2" x 14", 8-1/2" x 13", A3 or B4 paper is being used. For a duplex module (not duplex module/bypass tray), the exit tray is optional.

Bypass tray
This tray can also be used for special papers including transparency film. (See next page and page 1-17.)



NOTE
Automatic two-sided printing can be done only onto plain paper. Special papers cannot be used for two-sided printing. (See page 1-18 for explanation on special paper.)

NOTES
- Do not press down on the bypass tray or the exit tray.
- The duplex module requires the installation of other peripheral devices in order to be functional and cannot be installed together with some other devices. The table on page 7-4 shows the configurations which are compatible.

Specifications

Name	Duplex module or Duplex module/bypass tray
Paper size (for duplex copy)*1	11 x 17, 8-1/2 x 14, 8-1/2 x 13, 8-1/2 x 11, 8-1/2 x 11R, 5-1/2 x 8-1/2 R, A3, B4, A4, A4R, B5, A5R
Paper weight (for duplex copy)*1	16 to 28 lbs. or 60 to 105 g/m^2
Reference paper position	Center
Bypass tray paper capacity*2	100 sheets (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2)
Dimensions	Duplex module: 4-17/32" (W) x 16-15/64" (D) x 16-25/64" (H) (115 mm (W) x 412 mm (D) x 416 mm (H)) Duplex module/bypass tray: 17-49/64" (W) x 17-19/64" (D) x 16-25/64" (H) (451 mm (W) x 439 mm (D) x 416 mm (H))
Weight	Duplex module: Approx. 11.1 lbs. (5 kg) Duplex module/bypass tray: Approx. 16.6 lbs. (7.5 kg)

*1 For paper size and paper weight for the bypass tray, see “Specifications of paper trays (types and sizes of applicable papers for trays)” on page 1-17.

*2 Duplex module/bypass tray only.

Name	Exit tray
Paper output	Print face down
Paper capacity	100 sheets (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2)
Paper size	Max. 11" x 17" or A3, Min. 5-1/2" x 8-1/2"R or A5R
Paper type and weight to be output	Plain paper, 16 to 28 lbs. or 60 to 105 g/m^2

Specifications are subject to change for improvement without notice.

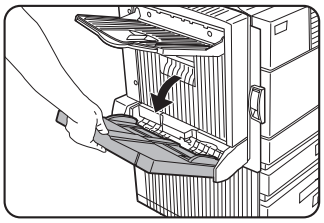
Loading paper in the bypass tray

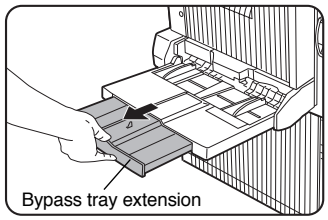
The bypass tray can be used for plain paper and special papers including labels. Up to 100 sheets of standard paper can be set. For paper types that can be used in the bypass tray, refer to page 1-17.

NOTE

If the paper type or size is changed, be sure to enter the paper type and size as in step 4.

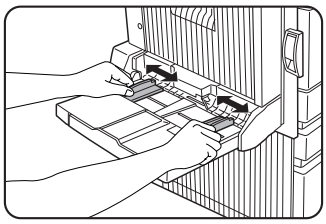
1 Open the bypass tray.



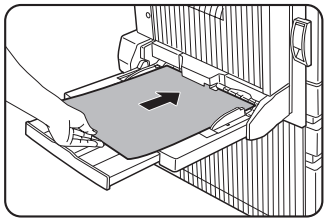


When setting 11"x 17", 8-1/2" x 14", 8-1/2" x 13, A3 or B4 paper, be sure to extend the bypass tray extension.

2 Set the bypass tray paper guides to the width of the paper to be used.



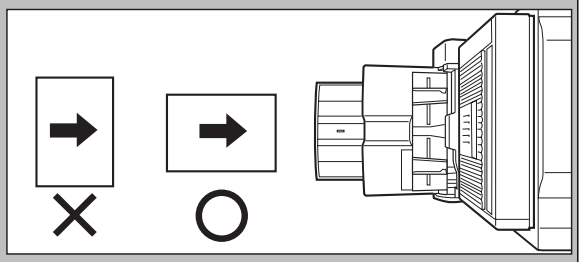
3 Insert the paper all the way into the bypass tray.



Set the paper face down. If there is a clearance between the paper and the paper guides, the paper may not be fed correctly. Adjust the guides so that they contact the edges of the paper.

NOTES

- When using 5-1/2" x 8-1/2" paper, A5 paper or postcards, be sure to load them with their shorter edge into the feed slot as shown in the illustration.



- When using special paper, postcards or transparency film, be sure to feed them one sheet at a time. If you set more than one sheet, a paper misfeed may occur.
- When adding paper, first remove remaining paper, combine it with the paper to be added, and then reload as a single stack. Adding paper without stacking it correctly may cause a paper misfeed.
- When printing onto transparency film, remove the output sheets as soon as possible.
- For transparency film, use SHARP recommended film.

4 Set the type and size of the loaded paper.

When the paper system is changed from the inch system to the AB system or vise versa or when the paper type is changed, the paper type must be designated. For setting the paper size and type, see page 1-19.

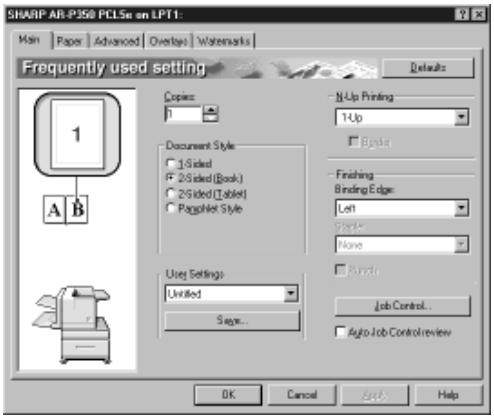
5 Loading paper in the bypass tray is now complete.

Setting the printer driver for duplex module, bypass tray and exit tray

When using the duplex module (including the bypass tray and the exit tray) for printing, select "Properties" and make selections as follows for the print job.
The screens used in the following descriptions are for a PCL driver in the Windows 98 environment.

■ Two-sided printing

Open the "Main" tab and check the radio button of the desired two-sided printing mode.

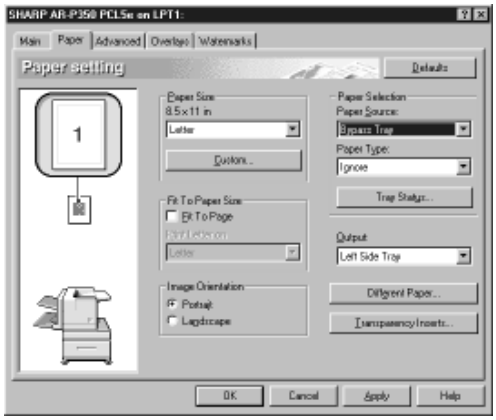


■ Using the bypass tray

Open the "Paper" tab shown in the illustration below and select "Bypass Tray" in the "Paper Selection" drop down.

■ Using the exit tray mounted to the duplex module

Open the "Paper" tab shown in the illustration below and select "Left Side Tray" in the "Output" drop down.



NOTES

- The settings screens above will appear only if the devices have been set properly in the printer driver configuration (see NOTE on page 2-5).
- The combination of paper selection and other functions may not be compatible. For instance, if heavy paper, envelopes, label stock, etc. are selected, it will not be possible to select duplex, offset tray, saddle stitch, etc. For details, see printer driver help.

Copying in the duplex mode

For copying in the duplex mode, press the COPY key on the operation panel and make all selections on the copy mode basic screen.

■ Automatic duplex copying

Touch the [2-SIDED COPY] key on the copy mode basic screen. A selection screen for two-sided copying will appear.

■ Using the bypass tray

Touch the [PAPER SELECT] key on the copy mode basic screen. A selection screen for paper source will appear. Select the bypass tray on this screen.

■ Using the exit tray

Touch the [OUTPUT] key on the copy mode basic screen. A selection screen for output will appear. Select the exit tray mounted to the duplex module on this screen.

Troubleshooting (concerning the duplex module)

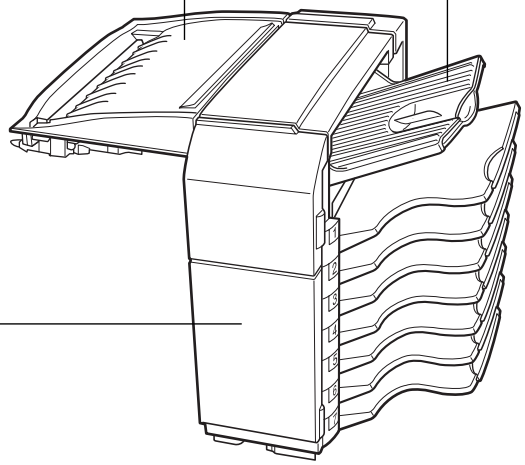
Check the list below before calling for service.

Problem	Check	Solution or cause
The printer will not print duplex prints.	Message indicating the paper type cannot be used for two-sided printing displayed?	Special paper cannot be used for two-sided printing. Use a paper type adequate for two-sided printing. (See pages 1-18 and 5-2.)
	Message indicating the paper size cannot be used for two-sided printing displayed?	Use a paper size adequate for two-sided printing. (See pages 1-18 and 5-2.)
	Two-sided printing cannot be set in printing on the printer driver?	Open the Configuration tab in the printer driver setting and check the check box of Duplex Module. (See NOTE on page 2-5.)
	Bypass tray extension not extended?	When using 11 x 17, 8-1/2 x 14, 8-1/2 x 13, A3 or B4 paper, the bypass tray extension must be extended.
Printed images onto paper from the bypass tray are skewed.	Does the number of sheets exceed the limit?	Set paper within the allowable range.
	Paper guides properly set?	Set the paper guides properly to the paper size.
A paper misfeed occurs in the bypass tray.	Paper size and type set properly?	When using non-standard size paper or special paper, be sure to set the paper size and type. (See pages 1-17 to 1-19.)
	Does the number of sheets exceed the limit?	Set paper within the allowable range.
	Paper guides properly set?	Set the paper guides properly to the paper size.

MAIL-BIN STACKER

The mail-bin stacker has 7 mail bins which can each be designated to receive printed output from a user or a group of users .
Output paper in the copy mode and the fax mode will be delivered to the top tray of the stacker separated from printed output. (Printed output can also be delivered to the top tray.)

Part names



NOTES

- Do not put pressure on the mail-bin stacker, particularly on the top tray and mail bins.
- Do not place anything on the top cover. Doing so will interfere with the machine's paper handling during duplex printing.
- The top tray and each mail bin are extendable. To print onto large paper (11" x 17", 8-1/2" x 14", 8-1/2" x 13", A3 or B4), extend the tray.
- The mail-bin stacker requires the installation of other peripheral devices in order to be functional and cannot be installed together with some other devices. The table on page 7-4 shows the configurations which are compatible.

Specifications

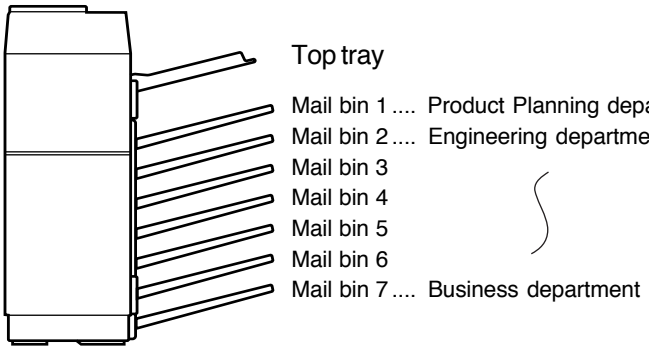
Name	Mail-bin stacker
Number of trays	8 (Top tray and seven mail bins)
Paper output	Print face down
Tray type	Top tray: normal tray, Mail bins: mail bin tray
Tray capacity	Top tray: 250 sheets (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2) Mail bins: 100 sheets each (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2)
Paper sizes	Top tray: same as the specifications of paper for feeding in the main unit Mail bins: 11 x 17, 8-1/2 x 14, 8-1/2 x 13, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, A3, B4, A4, A4R, B5, B5R
Paper weight	Top tray: same as the specifications of paper for feeding in the main unit Mail bins: 15 to 34 lbs. or 60 to 105 g/m^2
Paper types	Top tray: same as the specifications of paper for feeding in the main unit Mail bins: plain paper only
Tray full detection	Provided in both the top tray and the mail bins
Power supply	Requires the installation of an optional power supply unit (See page 1-8.)
Dimensions	18-5/16" (W) x 20-7/8" (D) x 20" (H) (465 mm (W) x 530 mm (D) x 508 mm (H))
Weight	Approx. 41.9 lbs. (19 kg)

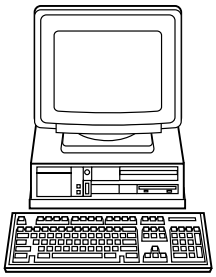
Specifications are subject to change for improvement without notice.

Specifying mail bins to receive printed output

Printed output can be specified in the printer driver to be delivered to an assigned mail bin or to the top tray. Assigning mail bins to individual users or groups of users reduces the mixing of print jobs simplifying the retrieval of printed output. When separation of output is not required, the top tray can be selected for delivery.

■ Using the mail-bin stacker





1 Assign users to mail bins.

It is recommended that the network administrator assign bins by individual or by department. For example, the Product Planning department can be assigned to mail bin 1 and the Engineering department assigned to mail bin 2 etc.

2 Select the mail bin for receiving prints in the printer driver.

For the setting in the printer driver, see the description below.

5

Setting in the printer driver

Select “Properties” in the printer driver setting screen and proceed as below.

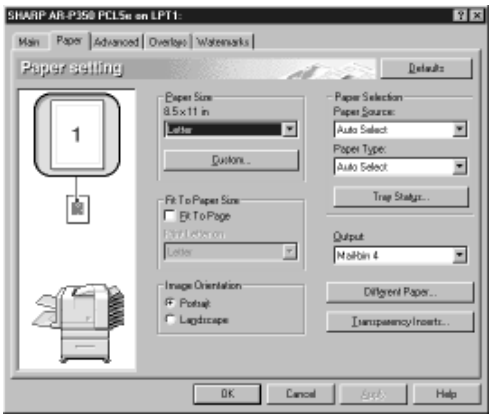
■ Specifying a mail bin

Open the “Paper” tab and select a mail bin for delivery under “Output”.

NOTES

- The settings screens to the right will appear only if the devices have been set properly in the printer driver configuration (see NOTE on page 2-5).
- The combination of paper selection and other functions may not be compatible. For instance, if heavy paper, envelopes, label stock, etc. are selected, it will not be possible to select duplex, offset tray, saddle stitch, etc. For details, see printer driver help.

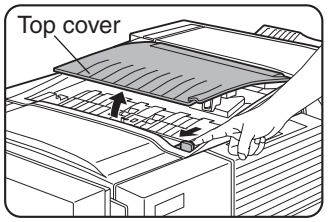
The illustration below shows the screen for a PCL printer driver in the Windows 98 environment as an example.



Misfeed in the mail-bin stacker

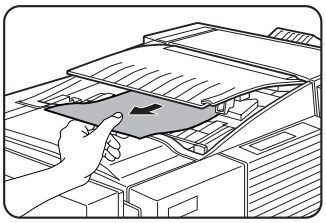
If a misfeed has occurred in the mail-bin stacker during printing, remove the misfed paper following the procedure below.

1 Open the top cover.



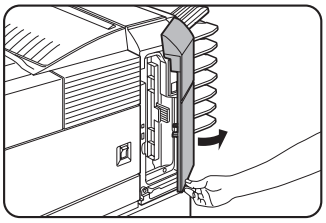
Move the release lever in the direction of the arrow in the illustration to open the top cover.

2 Remove the misfed paper.

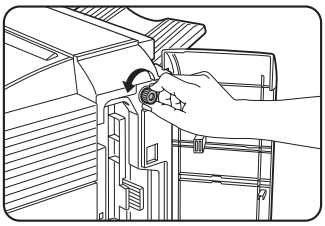


Be careful not to tear the misfed paper during removal.
After removing the paper, press down on the top cover to close it.

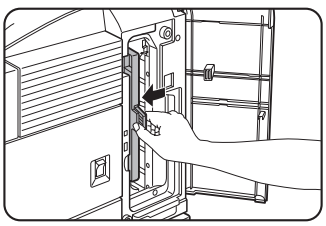
3 If the misfed paper is not found in step 2, open the front cover.



4 Turn the roller rotating knob in the direction of the arrow to remove the misfed paper.

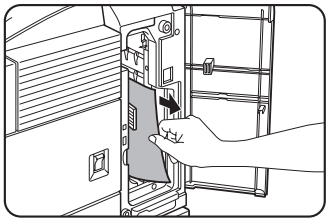


5 Open the paper guide.



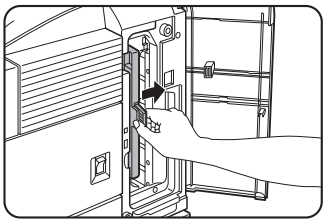
Unlatch the paper guide and open it in the direction of the arrow.

6 Remove the misfed paper.



Be careful not to tear the misfed paper during removal.

7 Close the paper guide.



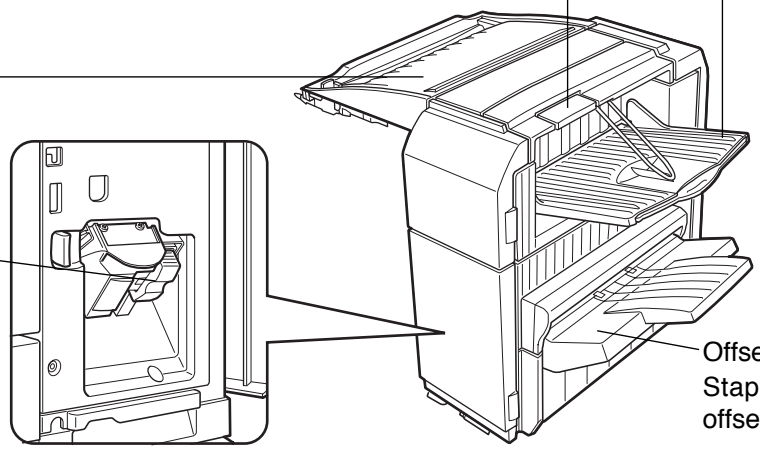
Close the paper guide securely.

8 Close the front cover.

FINISHER

The finisher can deliver collated sets either stapled or unstapled. Unstapled sets can be offset stacked from the previous set for easy separation of the sets.

Part names



NOTES

- Do not put pressure on the finisher (particularly each tray).
- Do not place anything on the top cover. Doing so will interfere with the machine's paper handling during duplex printing.
- The tray moves up and down during operation. Be careful not to impede its movement.
- The finisher requires the installation of other peripheral devices in order to be functional and cannot be installed together with some other devices. The table on page 7-4 shows the configurations which are compatible.

5

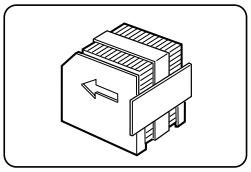
Specifications

Name	Finisher
Number of trays	2
Paper output	Print face down
Tray type	Top tray: normal tray, Lower tray: offset tray
Tray capacity	Top tray: 500 sheets (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2) Lower tray: 750 sheets (8-1/2" x 11" or A4 size, 20 lbs. or 80 g/m^2)
Paper sizes	Top tray: same as the specifications of paper for feeding in the main unit Lower tray: Max. 8-1/2" x 11" or A4, Min. B5
Paper weight	Top tray: same as the specifications of paper for feeding in the main unit Lower tray: 16 to 34 lbs. or 60 to 128 g/m^2
Paper types	Top tray: same as the specifications of paper for feeding in the main unit Lower tray: plain paper only
Tray full detection	Provided in both the top tray and the lower tray
Offset function	Provided for the lower tray only. The offset amount is approx. 1 inch (25 mm)
Paper sizes for stapling	8-1/2" x 11", A4, and B5
Stapling capacity	30 sheets* (8-1/2" x 11" or A4 or smaller 20 lbs. or 80 g/m^2) *Up two sheets of cover stock (34 lbs. or 128 g/m^2) can be included.
Staples	Single staple can be placed in the top left or lower left corners or two staples can be centered on the left side
Power supply	Requires the installation of an optional power supply unit (See page 1-8.)
Dimensions	18-1/8" (W) x 20-7/8" (D) x 20" (H) (460 mm (W) x 530 mm (D) x 508 mm (H))
Weight	Approx. 46.3 lbs. (21 kg)

Specifications are subject to change for improvement without notice.

Supplies

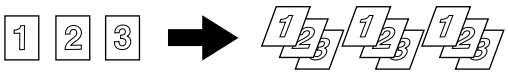
AR-SC1 staple cartridges must be used for this finisher. The cartridge package contains three cartridges approx. 3000 staples each.



Finisher functions

■ Sort mode

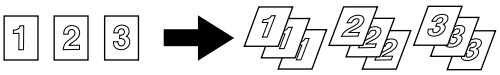
Sorted sets will be delivered.



Original Printouts

■ Group mode

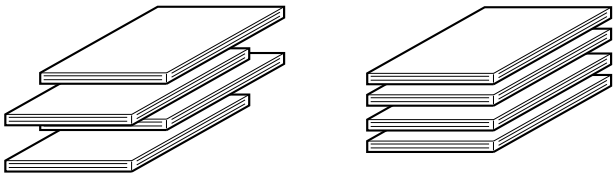
Groups of prints or copies of the same page will be delivered.



Original Printouts

■ Offset mode

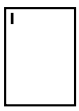
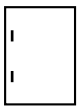
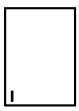
Offset mode Non-offset mode



Sets will move from side to side so that each set or group will be offset from the previous set or group for easy separation.
Offset will function for non-stapled printer or copier output, Non-offset can only be selected for copier output.
Stapled sets will not be offset.

■ Staple sort mode

Collated sets will be stapled and delivered to the offset tray. The stapling positions, orientation, paper size for stapling, and stapling capacity are shown below.

Stapling positions	Portrait orientation		Landscape orientation	
Top left corner of printouts		Available paper sizes: 8-1/2" x 11", A4 and B5 Stapling capacity: Up to 30 sheets for any available sizes	—	Stapling cannot be made.
Center left two positions of printouts		Same as above		
Lower left corner of printouts		Same as above		

Using the finisher functions

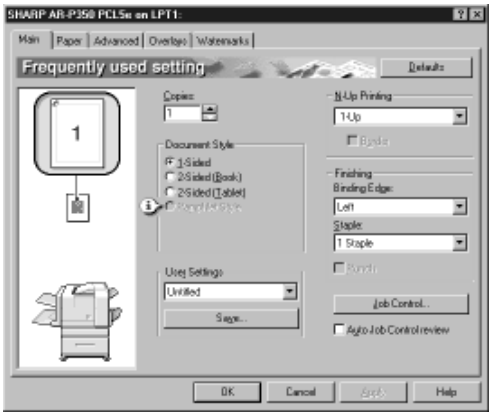
■ Selecting the stapling function from a printer driver.

Select "Properties" on the printer driver setting screen and open the "Main" tab. Select "Left", "Right" or "Top" under "Binding Edge" and then select "1 Staple" or "2 Staples" under "Staple".

NOTES

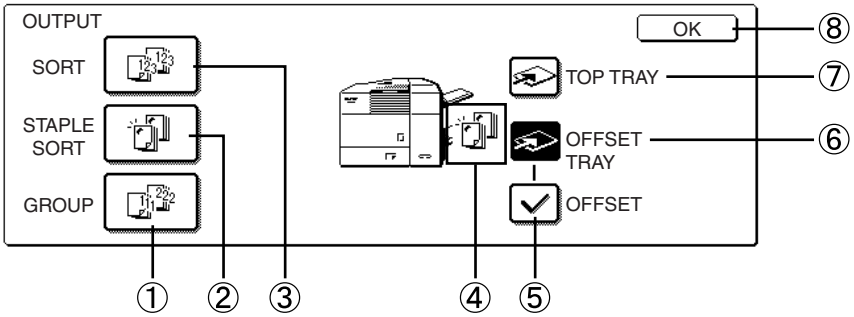
- The settings screens to the right will appear only if the devices have been set properly in the printer driver configuration (see NOTE on page 2-5).
- The combination of paper selection and other functions may not be compatible. For instance, if heavy paper, envelopes, label stock, etc. are selected, it will not be possible to select duplex, offset tray, saddle stitch, etc. For details, see printer driver help.

The illustration below shows the screen for a PCL printer driver in the Windows 98 environment as an example.



■ Using the finisher functions in the copy mode

When the [OUTPUT] key on the copy mode basic screen is touched, a screen for selecting the sort/group/staple sort functions and selecting an exit tray will appear. As a selection is made, the touch key for the selection will be highlighted.



① **[GROUP] key (See page 5-10.)**
When Group is selected, all copies of the same original will be grouped.

② **[STAPLE SORT] key (See page 5-10.)**
When Staple Sort is selected, sorted sets will be stapled and delivered to the offset tray. (They will not be not offset stacked.)

③ **[SORT] key (See page 5-10.)**
When Sort is selected, sets of copies will be sequentially delivered.

④ **Icon display**
An icon representing a selected function (sort, staple sort or group) is displayed.

⑤ **[OFFSET] key (See page 5-10.)**
If Offset is checked, offset is enabled. If not checked, offset will not function. If staple sort is selected, the check mark of offset will be automatically canceled.

⑥ **[OFFSET TRAY] key (See page 5-9.)**
When the offset tray is selected, copies will be delivered to the offset tray. When staple sort is selected, the offset tray will be automatically selected.

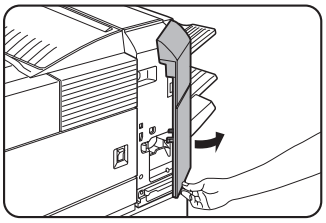
⑦ **[TOP TRAY] key**
When top tray is selected, copies will be delivered to the top tray.

⑧ **[OK] key**
Press to close the output screen and to return to the basic screen.

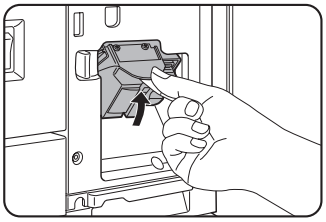
Staple cartridge replacement

When the staple cartridge becomes empty, the message “Add staples.” will appear in the message display of the operation panel.
Follow the procedure below to replace the staple cartridge.

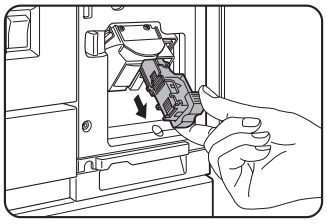
1 Open the front cover.



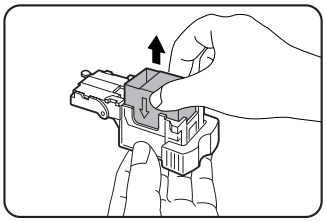
2 Turn the staple unit to face up.



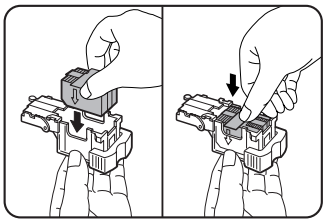
3 Pull the release lever for the staple box and remove the box.



4 Remove the empty staple cartridge from the staple box.

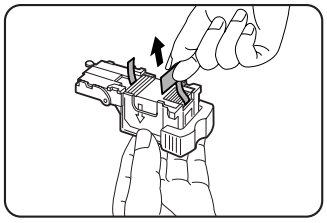


5 Insert a new staple cartridge into the staple box aligning the arrow of the staple cartridge with that of the staple box.

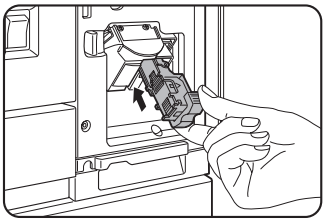


NOTES
- Do not remove the tape from the cartridge before inserting the staple cartridge into the box.
- When reinstalling the staple box, push it in until it clicks into place.

6 Remove the tape from the staple cartridge by pulling it straight.

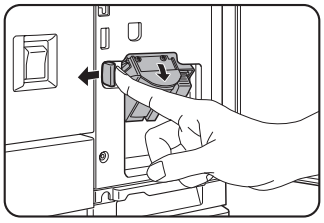


7 Reinstall the staple box.



Push the staple box in until it clicks into place.

8 While pushing the staple unit release lever to the left, rotate the staple unit to face down.



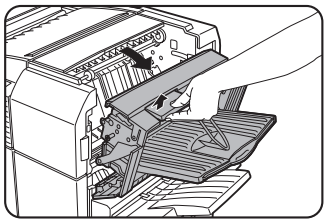
9 Close the front cover.

NOTE
Make a test print or copy in the staple sort mode to ensure that stapling is performed properly.

■ Checking the staple unit

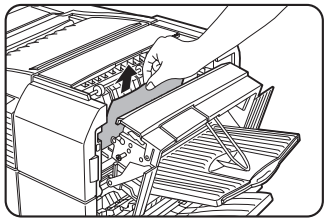
If the message “CHECK THE STAPLER UNIT” or “CHECK STAPLER POSITION OR STAPLE JAM” appears, follow the procedure below.

1 Open the finisher compiler.



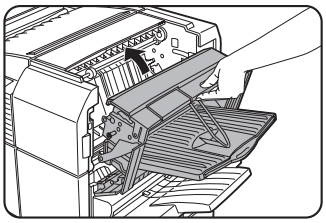
Release the latch to open the finisher compiler.

2 Remove the misfed paper from the stapler compiler.

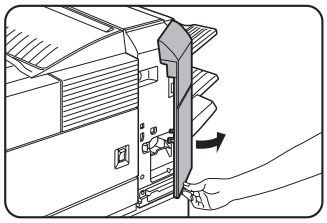


Be careful not to tear the misfed paper during removal.

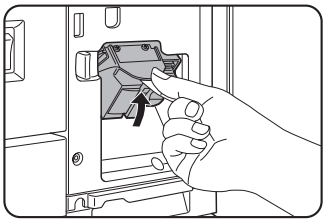
3 Close the finisher compiler.



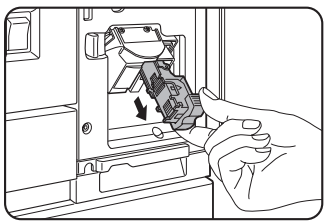
4 Open the finisher front cover.



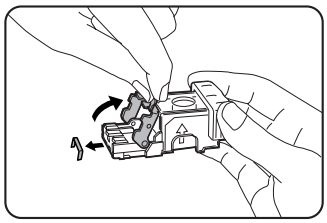
5 Turn the staple unit to face up.



6 Pull the release lever for the staple box and remove the box.

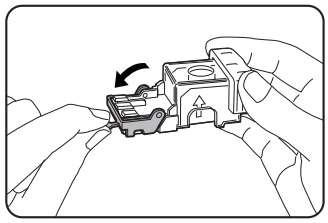


7 Raise the lever at the end of the staple box.

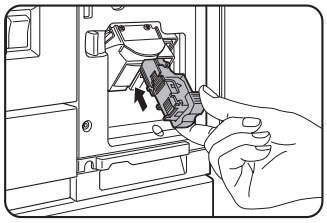


Remove the top staple if it is bent. If bent staples remain, a staple jam will occur again.

8 Return the lever to its original position.

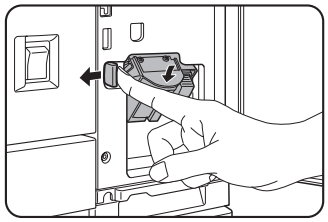


9 Reinstall the staple box.



Push the staple box in until it clicks into place.

10 While pushing the staple unit release lever to the left, rotate the staple unit to face down.



11 Close the front cover.

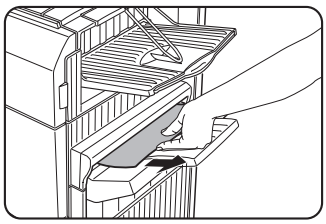
NOTE

Make a test print or copy in the staple sort mode to ensure that stapling is performed properly.

Misfeed in the finisher

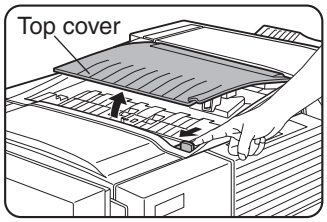
When a misfeed occurs in the finisher, remove the misfed paper following the procedure below.

1 Remove the misfed paper from the output area.



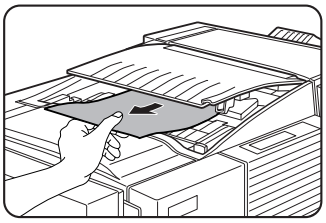
Be careful not to tear the misfed paper during removal.

2 Open the finisher top cover.



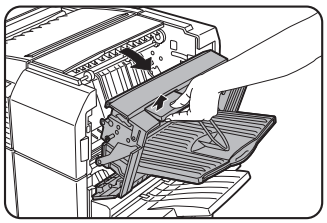
Move the tab in the direction of the arrow as shown in the illustration to open the top cover.

3 Remove the misfed paper.



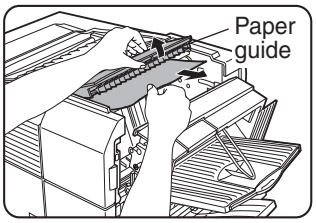
Be careful not to tear the misfed paper during removal.
After removing the paper, press down on the top cover to close it.

4 Open the finisher compiler.



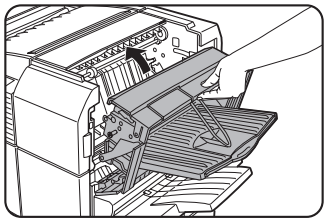
Release the latch to open the finisher compiler.

5 Raise the paper guide and remove the misfed paper.



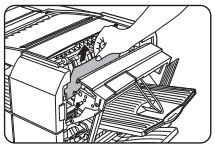
Do not remove paper from the stapler compiler.

6 Close the finisher compiler.



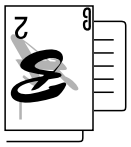
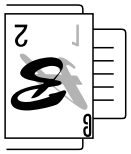
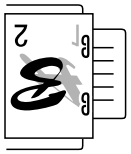
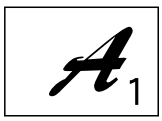
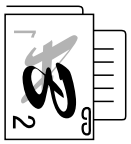
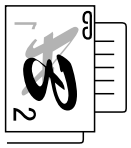
Troubleshooting finisher problems

Check the list below before calling for service.

Problem	Check	Solution or cause
Stapling position is not correct.	Stapling position not set correctly?	Check the stapling position setting. (See page 5-16.)
The finisher does not operate.	Are any finisher covers open?	Close all covers.
	Message indicating need to remove paper from the stapler compiler displayed?	Open the finisher as described in step 4 on page 5-14 and remove all paper from the stapler compiler. 
Stapling cannot be performed.	Is a "CHECK THE STAPLER UNIT" or "CHECK STAPLER POSITION OR STAPLE JAM" message displayed?	Check the staple unit. (See page 5-13.)
	Is a message "ADD STAPLES" displayed?	Replace the staple cartridge. (See page 5-12.)
	Different size paper included?	Stapling cannot be performed onto different size paper.
Stapled sets are not stacked correctly or some sheets in a set are not stapled.	Paper heavily curled?	Paper may be curled heavily depending on the paper type and quality. Remove paper from the paper tray or the bypass tray, turn it upside down, and load it again.

Stapling position quick reference guide for duplex output

The orientation of the copy paper, original, scanned original data, and binding position selection are all interrelated. The table below shows these relationships.

		Orientation of original or original data			Output result	
		Page 1	Page 2	Page 1 & Page 2 Duplexed		
Portrait orientation printing	Left binding				One-position stapling	Two-position stapling
	Top binding				One-position stapling 	Two-position stapling with top binding cannot be made.
	Right binding				One-position stapling 	Two-position stapling 
Landscape orientation printing	Left binding				One-position stapling 	Two-position stapling with left binding cannot be made.
	Top binding				One-position stapling	Two-position stapling
	Right binding				One-position stapling 	Two-position stapling with right binding cannot be made.

NOTES

- Stapling can only be done when the offset tray has been selected.
- If mixed paper sizes are selected for stapling jobs, stapling will be automatically canceled.

NOTE

Transparency film, labels , envelopes and postcards cannot be stapled.

SADDLE STITCH FINISHER

The saddle stitch finisher can automatically place two staples for centerline binding of prints or copies and fold them along the centerline.

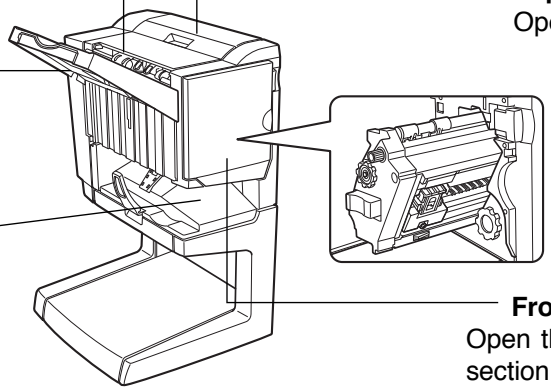
An optional hole punching unit is available for installation into the finisher.

Part names

Stapler compiler
Paper to be stapled is stacked temporarily.

Offset tray
Output which is stapled or offset will be delivered to this tray.

Saddle stitch tray
Saddle stitched output is delivered here.



Top cover
Open for misfeed removal.

Stapler section
Open the front cover and pull out this section to replace the staple cartridge or to remove jammed staples.

Front cover
Open the front cover and pull out this section for staple cartridge replacement or to remove jammed staples.

NOTES

- Do not press on the saddle stitch finisher (particularly the offset tray).
- Be careful about the offset tray during printing because the tray moves up and down.
- The saddle stitch finisher requires the installation of other peripheral devices in order to be functional and cannot be installed together with some other devices. The table on page 7-4 shows the configurations which are compatible.

5

Specifications

Name	Saddle stitch finisher
Number of trays	2
Paper output	Print face down
Tray system	Upper tray: offset tray, Lower tray: saddle stitch tray
Tray capacity	Upper tray: Non-stapling: Max. 1,000 sheets for 8-1/2 x 11 or A4 or smaller sizes (20 lbs. or 80 g/m^2), max. 500 sheets for 8-1/2 x 13 or B4 or larger sizes (20 lbs. or 80 g/m^2) Stapling: Max. 30 stapled sets and max. 1,000 sheets for 8-1/2 x 11 or A4 or smaller sizes (20 lbs. or 80 g/m^2), max. 30 stapled sets and max. 500 sheets for 8-1/2 x 13 or B4 or larger sizes (20 lbs. or 80 g/m^2) Lower tray: Stapled print capacity is (6 - 10) sheets x 10 sets or (1 - 5) sheets x 20 sets.
Paper size	Upper tray: 11 x 17, 8-1/2 x 14, 8-1/2 x 13, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2R, A3, B4, A4, A4R, B5, B5R, A5R Lower tray: max. 11 x 17, 8-1/2 x 11R, A3, B4, A4R
Paper weight	Upper tray: 16 to 54 lbs. or 60 to 205 g/m^2 Lower tray: 17 to 34 lbs. or 64 to 80 g/m^2
Paper types	Upper tray: plain paper, thick paper Lower tray: plain paper only
Tray full detection	Provided in both trays
Offset function	Upper tray only
Paper sizes for stapling	Upper tray: 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11", 8-1/2" x 11"R, A3, B4, A4, A4R, B5, and B5R Lower tray: 11" x 17", 8-1/2" x 11"R, A3, B4, and A4R

(Continued on next page)

Stapling capacity	8-1/2" x 11" or A4 or smaller size: 50 sheets*(20 lbs. or 80 g/m^2) 8-1/2" x 14" or B4 or larger size: 25 sheets*(20 lbs. or 80 g/m^2) *Up to two sheets of 34 lbs. or 128 g/m^2 paper can be included as covers.
Staples	Upper tray: Single staple can be placed in the top left or lower left corners or two staples can be centered on the left side. Lower tray: 4-47/64" (120 mm) pitch from the center of paper
Power supply	Requires the installation of an optional power supply unit (See page 1-8.)
Dimensions	28-9/32" (W) x 23-3/4" (D) x 39-3/8" (H) (718 mm (W) x 603 mm (D) x 1000 mm (H))
Weight	Approx. 86 lbs. (39 kg)

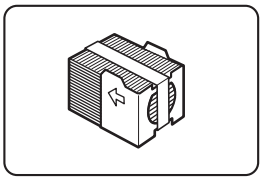
Name	Punch module			
Model*1	AR-PN1A	AR-PN1B*2	AR-PN1C*3	AR-PN1D*3
Number of holes	2	3 or 2	4	4
Paper sizes for hole punching	11"x17", 8-1/2"x14", 8-1/2"x11", 8-1/2"x11"R, A3, B4, A4, A4R, B5, B5R	3 holes: 11" x 17", 8-1/2" x 11", A3, A4 2 holes: 8-1/2"x14", 8-1/2" x 11"R	A3, A4	11"x17", 8-1/2"x14", 8-1/2"x11", 8-1/2"x11"R, A3, B4, A4, A4R, B5, B5R

*1 Multiple punch modules cannot be installed together. Some models may not be available in some regions.
*2 With AR-PN1B, two or three holes can be punched depending on the paper size.
*3 With AR-PN1C and AR-PN1D, the number of holes is the same. The hole interval, however, is not the same.

Specifications are subject to change for improvement without notice.

Supplies

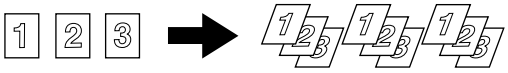
AR-SC2 staple cartridges must be used for this finisher. The cartridge package contains three cartridges approx. 5000 staples each.



Saddle stitch finisher functions

■ **Sort mode**

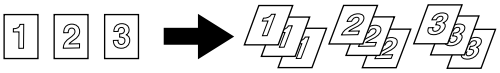
Sorted sets will be delivered.



Original Printouts

■ **Group mode**

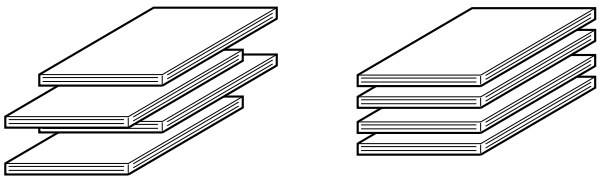
Groups of copies of the same page will be delivered.



Original Printouts

■ **Offset mode**

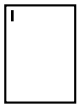
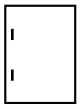
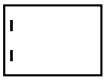
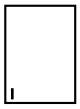
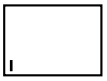
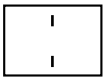
Offset mode Non-offset mode



Sets will move from side to side so that each set or group will be offset from the previous set or group for easy separation.
Offset will function for non-stapled printer or copier output, Non-offset can only be selected for copier output.
Stapled sets will not be offset.

■ Staple sort mode

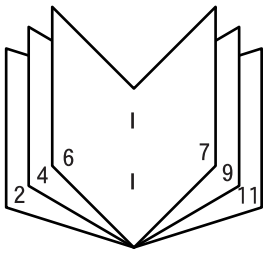
Collated sets of prints or copies will be stapled and delivered to the offset tray. When saddle stitching is selected, the prints or copies will be stapled at the center and delivered to the saddle stitch tray. The stapling positions, orientation, paper size for stapling, and stapling capacity are shown below.

Stapling positions	Portrait orientation		Landscape orientation	
Top left corner of printouts		Available paper sizes: 8-1/2" x 11", A4 and B5 Stapling capacity: Up to 50 sheets for any sizes		Available paper sizes: 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11" R, A3, B4, and A4R Stapling capacity: Up to 50 sheets for 8-1/2" x 11"R, A4R and B5R, and up to 25 sheets for other sizes
Center left two positions of printouts		Same as above		Available paper sizes: 11" x 17", 8-1/2" x 13", A3, and B4 Stapling capacity: Up to 25 sheets for any sizes
Lower left corner of printouts		Same as above		Available paper sizes: 11" x 17", 8-1/2" x 14", 8-1/2" x 13", 8-1/2" x 11" R, A3, B4, and A4R Stapling capacity: Up to 50 sheets for 8-1/2" x 11"R, A4R and B5R, and up to 25 sheets for other sizes
Saddle stitch on centerfold line.		Paper in the portrait direction cannot be saddle stitched.		Available paper sizes: 11" x 17", 8-1/2" x 11"R, A3, B4, and A4R Stapling capacity: Up to 10 sheets for any sizes

■ Saddle stitch function

The saddle stitch finisher can automatically place two staples for centerline binding of prints or copies and fold them along the centerline.

<Example>

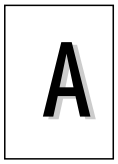


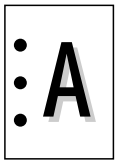
■ Hole punching (only if a punch module is installed)

If the saddle stitch finisher is equipped with a hole punch module, printed paper can be hole punched and delivered to the offset tray. Saddle stitching and hole punching cannot be selected at the same time. If the hole punching function is set for a paper size that is not available for hole punching, prints or copies will be made without hole punching. (For paper sizes available for hole punching, see page 5-18.) When using the hole punching function in the copy mode, place the original so that the top of the original is positioned to the rear side of the machine. If not, the holes will be incorrectly positioned. (See “Standard original setting orientation” on page 8 of the “Operation manual (for copier)”.

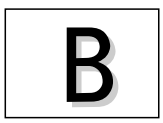
<Example>

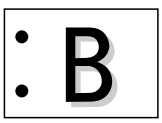
{Original 1} {Punch positions}





{Original 2} {Punch positions}





Using the saddle stitch finisher

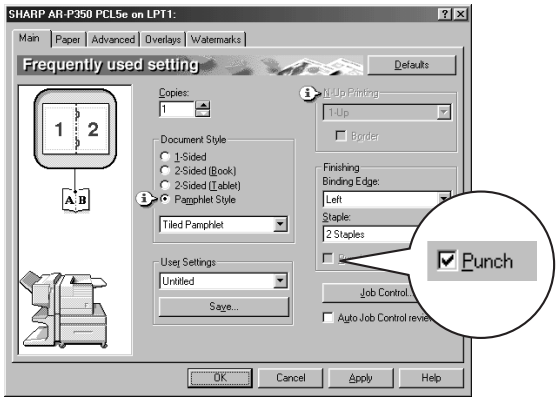
■ Selecting staple or saddle stitch from the printer driver.

Select “Properties” on the printer driver setting screen and open the “Main” tab shown in the illustration to the right. For normal edge or corner stapling, select “Left”, “Right” or “Top” under Binding Edge and “1 Staple” or “2 Staples” under “Staple”. For saddle stitch selection, check the radio button of “Pamphlet Style” under the Document Style heading, then select “Tiled Pamphlet” or “2-Up pamphlet”. Then select “2 Staples” in the “Staple” drop down under the “Finishing” heading.

■ Selecting hole punching

Open the “Main” tab and check “Punch” under the “Finishing” heading.

The illustration below shows the screen for a PCL printer driver in the Windows 98 environment as an example.

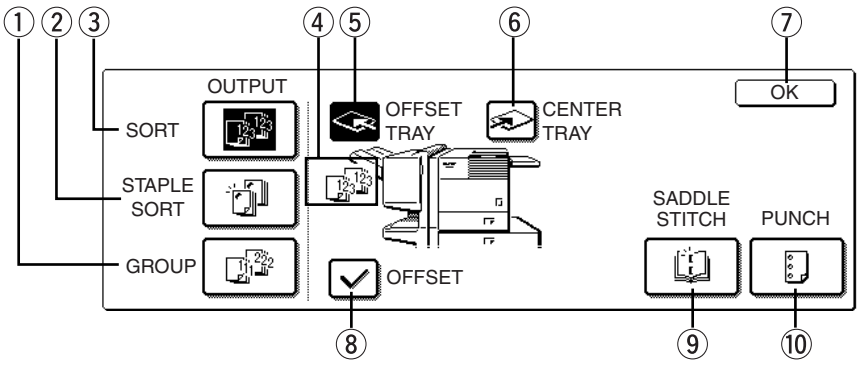


NOTES

- The settings screens above will appear only if the devices have been set properly in the printer driver configuration (see NOTE on page 2-5).
- The combination of paper selection and other functions may not be compatible. For instance, if heavy paper, envelopes, label stock, etc. are selected, it will not be possible to select duplex, offset tray, saddle stitch, etc. For details, see printer driver help.

■ Using the finisher functions in the copy mode

When [OUTPUT] is selected on the copy mode basic screen, a screen for making selections for sort, group, staple, punch and exit tray will appear.



① **[GROUP] key (See page 5-18.)**
When Group is selected, all copies of the same original will be grouped.

② **[STAPLE SORT] key (See page 5-19.)**
When Staple Sort is selected, sorted sets will be stapled and delivered to the offset tray. (They will not be not offset stacked.)

③ **[SORT] key (See page 5-18.)**
When Sort is selected, sets of copies will be sequentially delivered.

④ **Icon display**
An icon representing a selected function (sort, staple sort or group) is displayed.

⑤ **[OFFSET TRAY] key (See page 5-17.)**
If Offset is checked, the offset will be enabled. If not checked, the offset will not function. If the staple sort is selected, the check mark of offset will be automatically canceled.

⑥ **[CENTER TRAY] key**
If the center tray is selected, output paper will be delivered to the exit tray located above the main unit.

⑦ **[OK] key**
Press to close the [OUTPUT] screen and to return to the basic screen.

⑧ **[OFFSET] key (See page 5-18.)**
When the offset tray is selected, copies will be delivered to the offset tray. When staple sort is selected, the offset tray will be automatically selected.

⑨ **[SADDLE STITCH] key (See page 5-19.)**
When saddle stitching is selected, the copies will be stapled at the center and delivered to the saddle stitch tray.

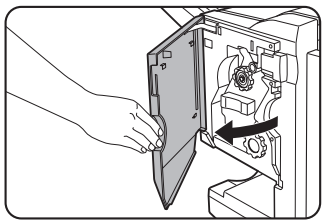
⑩ **[PUNCH] key (See page 5-19.)**
If the saddle stitch finisher is equipped with a hole punch module, printed paper can be three-hole punched and delivered to the offset tray.

Staple cartridge replacement and staple jam removal

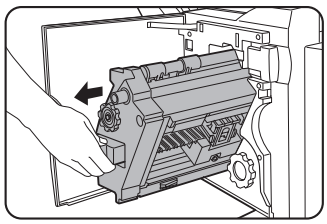
When the staple cartridge becomes empty or staples become jammed, a message will appear in the message display of the operation panel.
Follow the procedure below to replace the staple cartridge or remove jammed staples.

■ **Staple cartridge replacement**

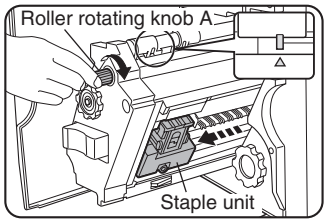
1 Open the front cover.



2 Pull out the stapler section.

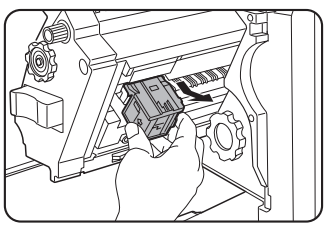


3 Turn roller rotating knob A in the direction of the arrow to move the staple unit to the front.

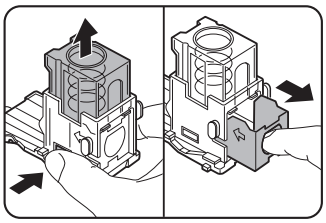


Turn the roller rotating knob until the triangle mark is aligned with the index.

4 Remove the empty staple box.



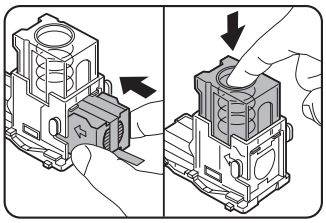
5 Remove the empty staple cartridge.



Press the lock button to unlock the staple box cover and remove the staple cartridge.

NOTE
If staples remain, the staple cartridge cannot be removed.

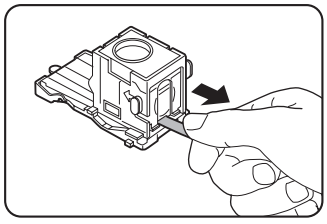
6 Insert a new staple cartridge into the staple box.



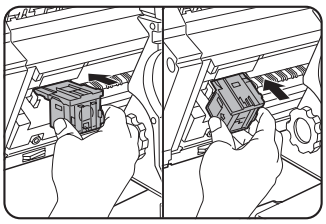
After inserting the staple cartridge, press down on the staple box cover to lock the cartridge in place.

NOTES
- Do not remove the tape from the cartridge before inserting the staple cartridge into the box.
- When reinstalling the staple box, push it in until it clicks into place.

7 Remove the tape from the staple cartridge by pulling it straight.



8 Insert the staple box.



Push the staple box in until it clicks into place.

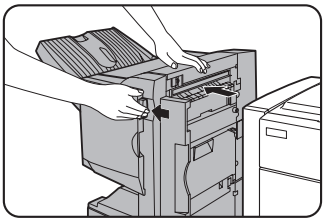
9 Push the stapler section back into the finisher.

10 Close the front cover.

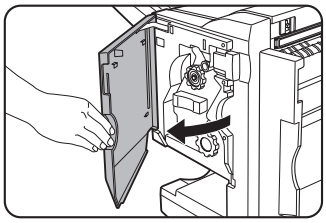
NOTE
Make a test print or copy in the staple sort mode to ensure that stapling is performed properly.

■ Staple jam removal

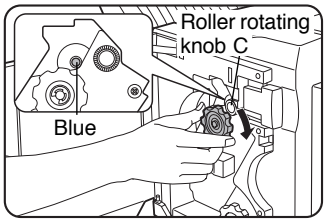
1 Unlatch the saddle stitch finisher and slide it away from the printer.



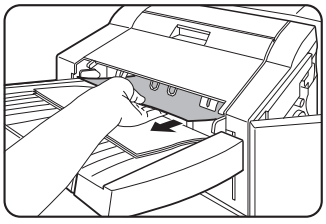
2 Open the front cover.



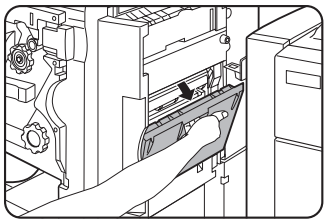
3 Turn roller rotating knob C as shown in the illustration until the blue indication is seen.



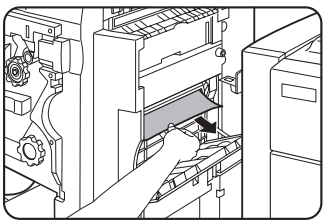
4 Remove the paper from the stapler compiler.



5 If saddle stitch was selected, open the saddle stitch section cover.

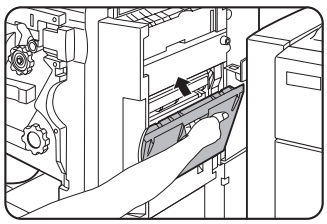


6 Remove the misfed paper.

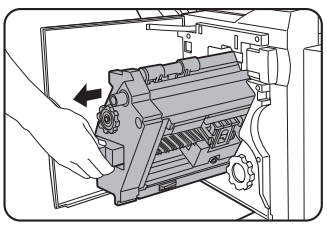


Be careful not to tear the misfed paper during removal.

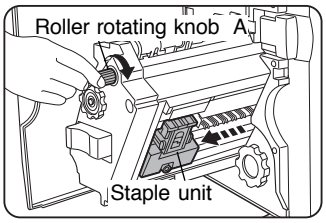
7 Close the saddle stitch section cover.



8 Open the front cover and pull out the stapler unit.

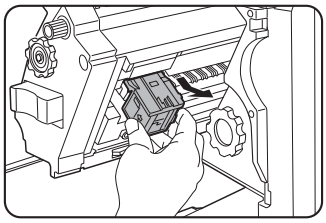


9 **Turn roller rotating knob A in the direction of the arrow to move the staple unit to the front.**

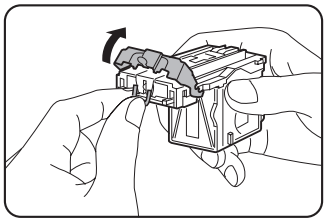


Turn the roller rotating knob until the triangle mark is aligned with the index.

10 **Remove the staple box.**

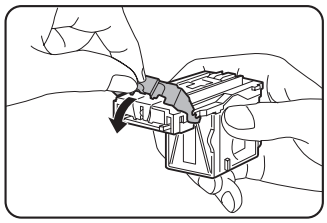


11 **Raise the lever at the end of the staple box.**

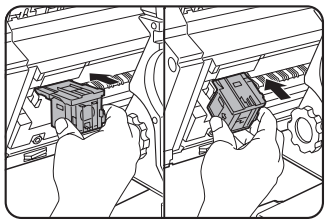


Remove the top staple if it is bent. If bent staples remain, a staple jam will occur again.

12 **Return the lever to its original position.**



13 **Reinstall the staple box.**



Push the staple box in until it clicks into place.

14 **Push the stapler section back into the finisher.**

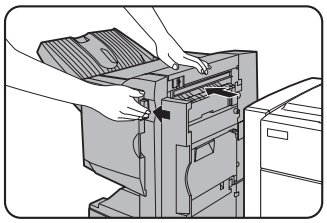
15 **Close the front cover.**

16 **Push the saddle stitch finisher back against the printer.**

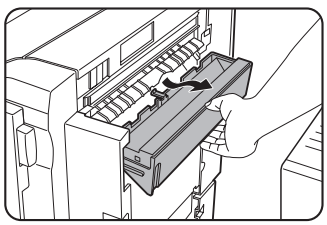
NOTE
Make a test print or copy in the staple sort mode to ensure that stapling is performed properly.

■ Disposal of hole punch scrap

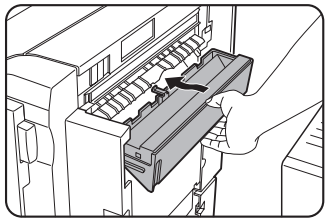
1 **Unlatch the saddle stitch finisher and slide it away from the printer.**



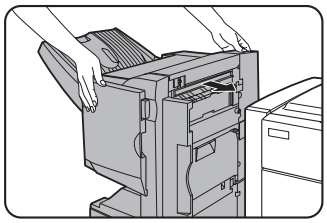
2 **Pull out the punch scrap collecting container and empty it.**



3 **Return the punch scrap collecting container to its original position.**



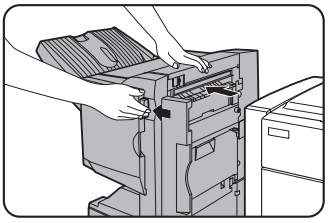
4 **Push the saddle stitch finisher back against the printer.**



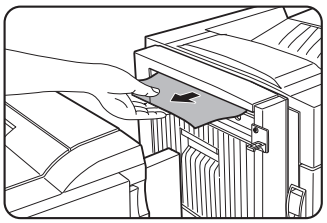
Misfeed in the saddle stitch finisher

When a misfeed occurs in the saddle stitch finisher, remove the misfed paper following the procedure below.

1 Unlatch the saddle stitch finisher and slide it away from the printer.

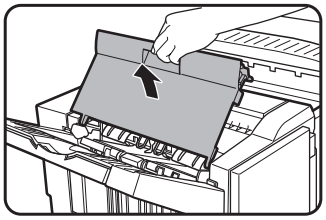


2 Remove the misfed paper from the main unit.

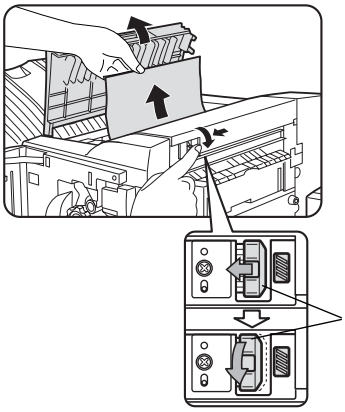


After removing the misfed paper, open and close the duplex module to reset the jam indicator. (step 1 or 5 on page 4-4)

3 If misfed paper is not found in step 1, open the top cover.

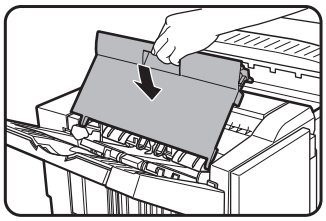


4 While pulling and turning roller rotating knob B, remove the misfed paper.

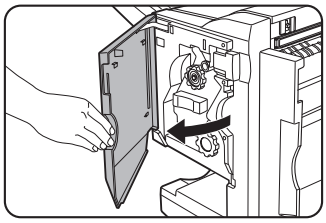


If the misfed paper is released by turning roller rotating knob B, remove it taking care not to tear the paper.

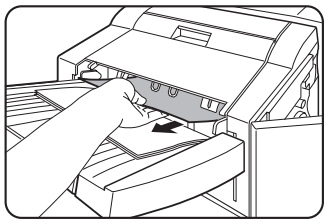
5 Close the top cover.



6 If saddle stitch was selected, open the front cover.

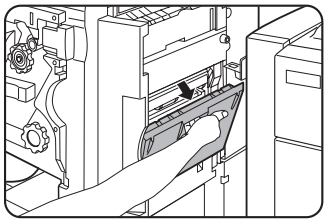


7 Remove the misfed paper from the stapler compiler.

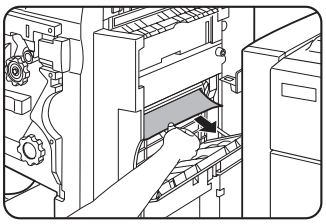


Be careful not to tear the misfed paper during removal.

8 Open the saddle stitch section cover.

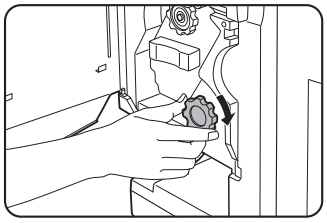


9 Remove the misfed paper.

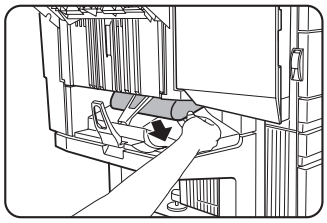


Be careful not to tear the misfed paper during removal.

10 **Turn roller rotating knob in the direction of the arrow.**

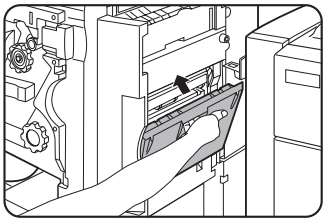


11 **Remove any misted paper from the saddle stitch tray.**

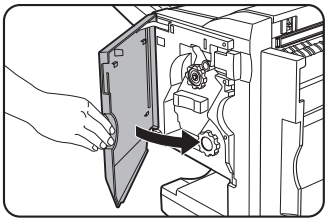


Be careful not to tear the misfed paper during removal.

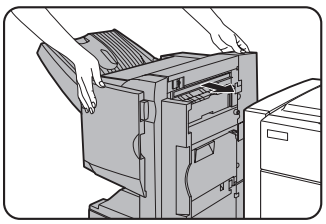
12 **Close the saddle stitch section cover.**



13 **Close the front cover.**



14 **Push the saddle stitch finisher back against the printer.**



Troubleshooting (concerning the saddle stitch finisher)

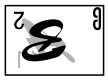
Check the list below before calling for service.

Problem	Check	Solution or cause
Stapling position is not correct (including saddle stitch).	Stapling position not set properly?	Check the stapling position setting. (See pages 5-27 and 5-28.)
The saddle stitch finisher does not operate.	Are any saddle stitch finisher covers open?	Close all covers. (See page 5-17.)
	Message indicating need to remove paper from the stapler compiler displayed?	Remove all remaining paper from the stapler compiler referring to step 4 on page 5-22.
Stapling cannot be performed (including saddle stitch).	Message requesting check for the staple unit displayed?	Remove jammed staples. (See page 5-22.)
	Message requesting adding staples displayed?	Replace the staple cartridge. (See page 5-21.) Check that a staple cartridge has been installed. (See page 5-22.)
	Different size paper included?	Stapling cannot be performed onto different size paper.
Stapled sets are not stacked correctly or some sheets in a set are not stapled.	Paper heavily curled?	Paper may be curled heavily depending on the paper type and quality. Remove paper from the paper tray or the bypass tray, turn it upside down, and load it again.
Cannot be punched.*	Message requesting check for punch module displayed?	Dispose of punch scraps. (See page 5-23.)

* When a hole punch module is installed

Stapling position quick reference guide for duplex output

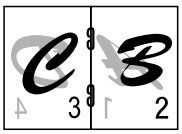
The orientation of the copy paper, original, scanned original data, and binding position selection are all interrelated. The table below shows these relationships.

		Orientation of original or original data			Output result	
		Page 1	Page 2	Page 1 & Page 2 Duplexed		
Portrait orientation printing	Left binding				One-position stapling	Two-position stapling
						Two-position stapling along the shorter edge cannot be made.
	Top binding				One-position stapling	Two-position stapling Top binding with two-position stapling cannot be made.
	Right binding				One-position stapling	Two-position stapling
						Two-position stapling along the shorter edge cannot be made.
Landscape orientation printing	Left binding				One-position stapling	Left binding with two-position stapling cannot be made.
	Top binding				One-position stapling	Two-position stapling
						Two-position stapling along the shorter edge cannot be made.
	Right binding				One-position stapling	Right binding with two-position stapling cannot be made.

5

Relation between print image and saddle stitch

The orientation of the copy paper, original, scanned original data, and binding position selection are all interrelated. The table below shows these relationships.

		Orientation of original or original data			Output result
Portrait orientation printing	Left binding	Page 1	Page 2	Page 1 & Page 2 Duplexed	
		Page 3	Page 4	Page 3 & Page 4 Duplexed	
	Right binding	Same as above			
Landscape orientation printing		Page 1	Page 2	Page 1 & Page 2 Duplexed	
		Page 3	Page 4	Page 3 & Page 4 Duplexed	

NOTES

- Transparency film, labels , envelopes and postcards cannot be stapled.
- If mixed paper sizes are selected for stapling jobs, stapling will be automatically canceled.

CHAPTER 6

KEY OPERATOR PROGRAMS

This chapter describes programs for use by the key operator. The key operator should read this chapter thoroughly to gain the maximum value these programs provide.

Page

KEY OPERATOR PROGRAMS 6-2
- Key operator program list 6-2
- Using the key operator programs 6-3
- Description of setting programs 6-7

KEY OPERATOR PROGRAMS

This chapter describes the key operator programs concerning printer features and other programs common to printer, copier and facsimile features. These programs are provided for use by the key operator. For key operator programs specific to copier, facsimile or network scanner features, see the separate operation manuals for these features. Key operator programs can only be accessed after a key operator code number has been entered.

The titles displayed on the touch panel are shown with { }.

NOTE

The key operator programs that can be accessed depend upon how the product is configured with optional equipment.

Key operator program list

Program name	Page
Account control	
Auditing mode	6-7
Print per account {Total pages per account}	6-7
Reset account {Resetting account}	6-7
Account number control	6-7
No print if ACC'T # invalid	
{Cancel jobs of invalid accounts}	6-7
Energy save	
Auto power shut-off timer	6-8
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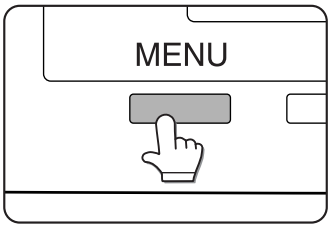
Using the key operator programs

NOTE
When using the key operator programs for the first time, register a key operator code number. (See steps 3 to 5 below or see steps 3 to 5 on page 6-6.)

- See page 6-6 if the product is equipped with an optional scanner module.

When the machine is being operated from the operation panel on the main unit:

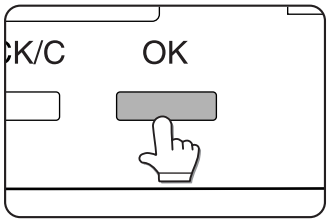
1 Press the [MENU] key.



Press the [MENU] key repeatedly until the message "KEY OPERATOR PROGRAMS" appears.

```
KEY OPERATOR
PROGRAMS
```

2 Press the [OK] key.




```
ENTER KEY OPERATOR
CODE              ----
```

The message shown to the left will appear.

3 Enter the first digit of your key operator code number and press the [OK] key.

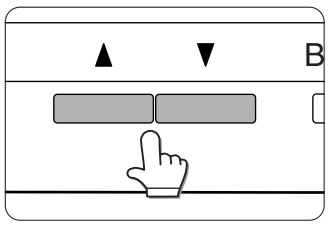
```
ENTER KEY OPERATOR
CODE              *-----
```

For the factory default setting of the key operator code number, see page 7-11.

"-" at the first digit will change to "*" and "-" at the second digit will blink. To correct the entered number, press the [BACK/C] key.

4 Use the same procedure as step 3 to enter the key operator code number from the second digit to the fifth digit and then press the [OK] key.

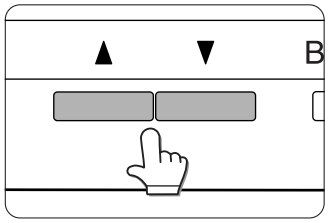
5 Press the [▲] or [▼] key to select the desired program and press the [OK] key.



<Example>

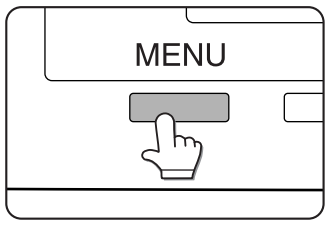
For registration of a key operator code number, select "KEY OPERATOR CODE CHANGE" and press the [OK] key.

6 Press the [▲] or [▼] key to select the desired item.



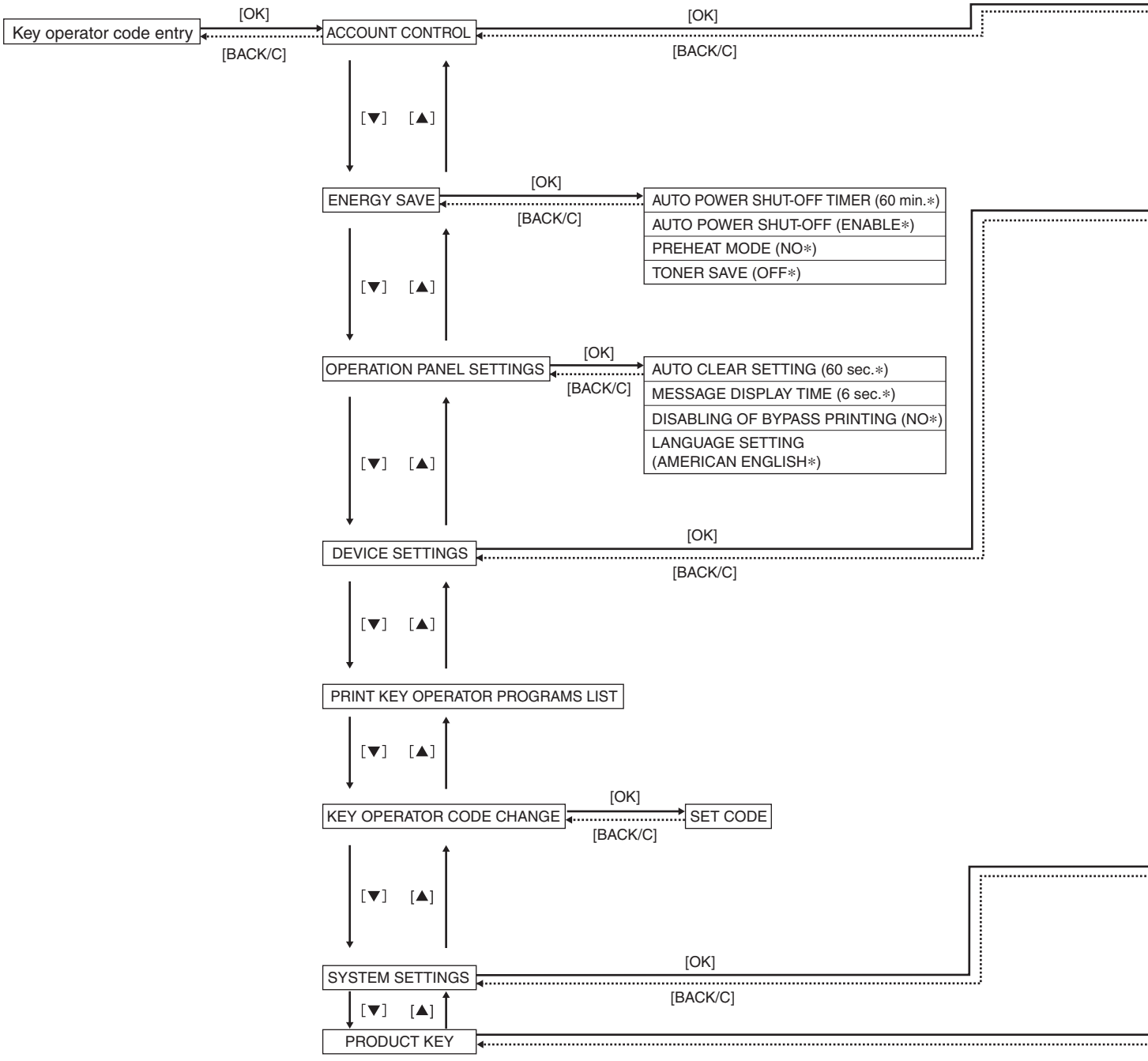
For settings of each program, see the description on and after page 6-7.

7 To exit the program, press the [MENU] key.

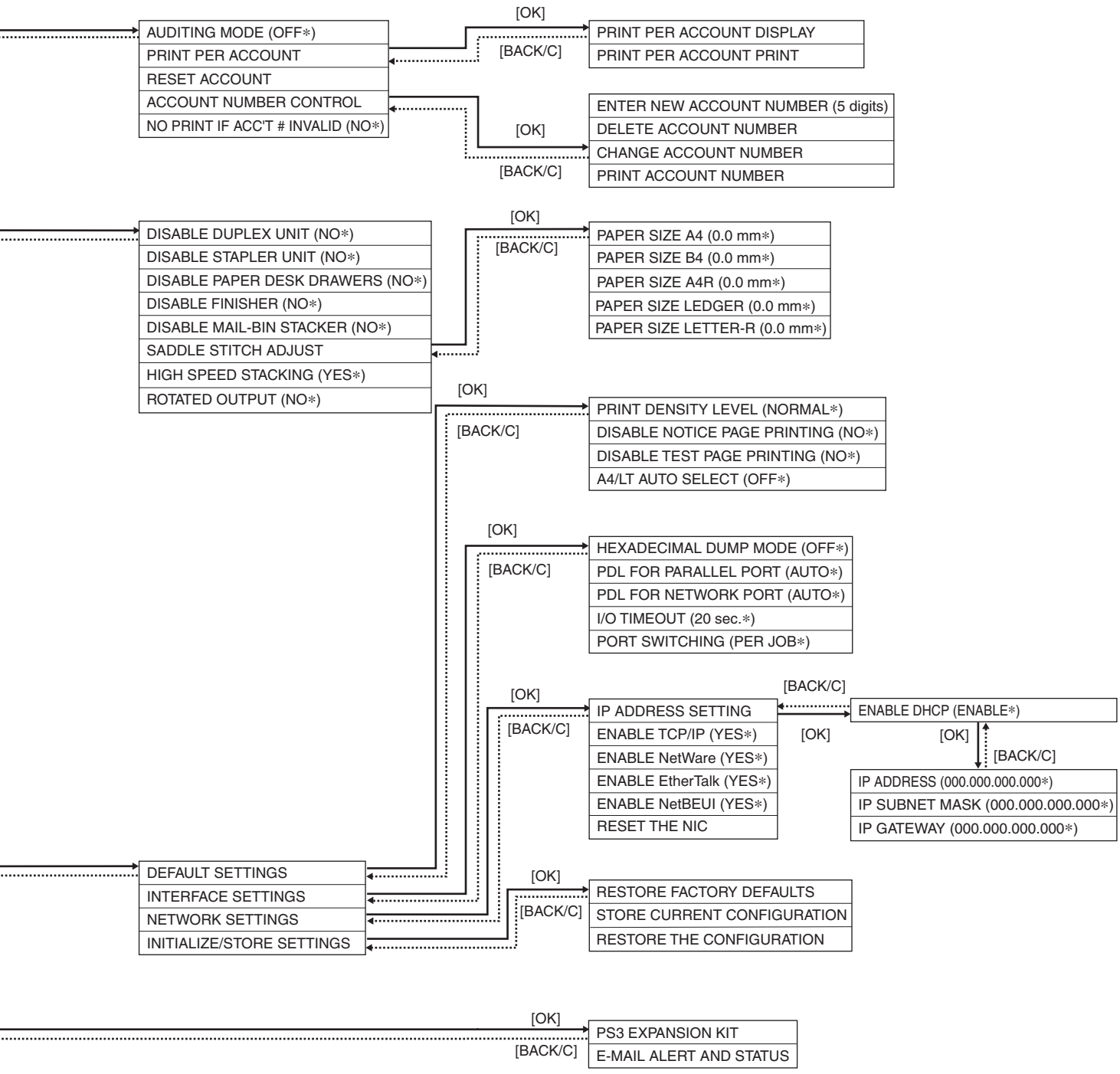


Structure of the setting method for key operator programs

The sequence for selection and setting of key operator programs are shown below. The [OK] and [BACK/C] keys allow navigation in either direction through the setting steps along a program setting path. Program steps start from the major categories shown at the left side of the chart and progress to the right.
When the [OK] key is pressed, a highlighted parameter shown in that step will be accepted and set. Acceptance of a parameter by [OK] will also advance the program to the next step of the setting procedure. When [OK] is pressed to register all settings at the final step of a setting procedure, the total program will be registered and the screen will return to display of the major program categories.
The [BACK/C] key is used to return to the previous screen. Successive pushes of the back key will return step by step back through the setting steps. Settings for any step can be changed by going back and selecting again.
The [▲] and [▼] keys are used to move up and down through selections on a setting screen to highlight a desired selection. A press of the [OK] key will register the highlighted selection.
A setting value on any setting screen containing an asterisk indicates the current registered value for that parameter. If a mistake is made in selection, press the [BACK/C] key to return to the selection screen for correction.
On this chart, settings accompanied by an asterisk in parentheses (*) indicate the factory default setting for that parameter.

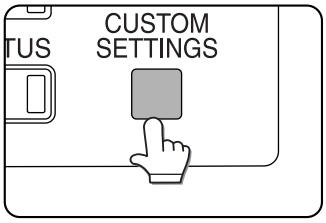


NOTE
To exit the key operator program, press the [MENU] key on the operation panel.

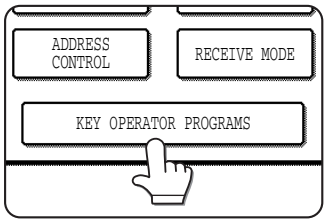

AUDITING MODE (OFF*)
PRINT PER ACCOUNT
RESET ACCOUNT
ACCOUNT NUMBER CONTROL
NO PRINT IF ACC'T # INVALID (NO*)
[OK]
[BACK/C]
PRINT PER ACCOUNT DISPLAY
PRINT PER ACCOUNT PRINT
[OK]
[BACK/C]
ENTER NEW ACCOUNT NUMBER (5 digits)
DELETE ACCOUNT NUMBER
CHANGE ACCOUNT NUMBER
PRINT ACCOUNT NUMBER
DISABLE DUPLEX UNIT (NO*)
DISABLE STAPLER UNIT (NO*)
DISABLE PAPER DESK DRAWERS (NO*)
DISABLE FINISHER (NO*)
DISABLE MAIL-BIN STACKER (NO*)
SADDLE STITCH ADJUST
HIGH SPEED STACKING (YES*)
ROTATED OUTPUT (NO*)
[OK]
[BACK/C]
PAPER SIZE A4 (0.0 mm*)
PAPER SIZE B4 (0.0 mm*)
PAPER SIZE A4R (0.0 mm*)
PAPER SIZE LEDGER (0.0 mm*)
PAPER SIZE LETTER-R (0.0 mm*)
[OK]
[BACK/C]
PRINT DENSITY LEVEL (NORMAL*)
DISABLE NOTICE PAGE PRINTING (NO*)
DISABLE TEST PAGE PRINTING (NO*)
A4/LT AUTO SELECT (OFF*)
[OK]
[BACK/C]
HEXADECIMAL DUMP MODE (OFF*)
PDL FOR PARALLEL PORT (AUTO*)
PDL FOR NETWORK PORT (AUTO*)
I/O TIMEOUT (20 sec.*)
PORT SWITCHING (PER JOB*)
[OK]
[BACK/C]
IP ADDRESS SETTING
ENABLE TCP/IP (YES*)
ENABLE NetWare (YES*)
ENABLE EtherTalk (YES*)
ENABLE NetBEUI (YES*)
RESET THE NIC
[BACK/C]
ENABLE DHCP (ENABLE*)
[OK]
[OK]
[BACK/C]
IP ADDRESS (000.000.000.000*)
IP SUBNET MASK (000.000.000.000*)
IP GATEWAY (000.000.000.000*)
DEFAULT SETTINGS
INTERFACE SETTINGS
NETWORK SETTINGS
INITIALIZE/STORE SETTINGS
[OK]
[BACK/C]
RESTORE FACTORY DEFAULTS
STORE CURRENT CONFIGURATION
RESTORE THE CONFIGURATION
[OK]
[BACK/C]
PS3 EXPANSION KIT
E-MAIL ALERT AND STATUS

When the machine is being operated from the touch panel on a scanner module:

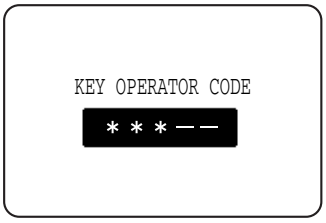
1 Press the [CUSTOM SETTINGS] key.



2 Touch the KEY OPERATOR PROGRAMS key.

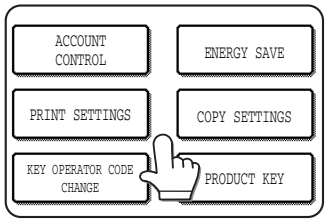


3 Use the numeric keys to enter the five-digit key operater code number.



Each time a number is entered, the dashes (-) in the display will change to asterisks (∗). For the factory default setting of the key operator code number, see page 7-11.

4 Touch the key to select the desired major category of the key operator programs.



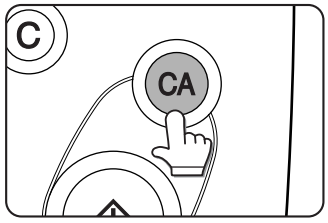
<Example>

For registration of the key operator code number, touch "KEY OPERATOR CODE CHANGE".

5 Make desired settings for the selected program.

Detailed descriptions for program settings start on the next page.

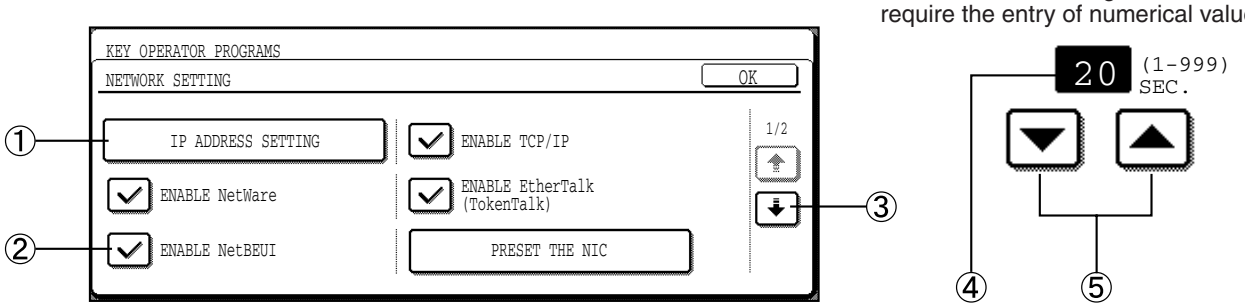
6 Press the [CA] key to exit the program.



Supplementary explanation of key operation for key operator programs

(When the machine is being operated from the touch panel on a scanner module:)

These keys and indicator are available on setting screens that require the entry of numerical values.



① The name of the program category or particular item to be set will appear on the touch key. A touch of the key will select the item displayed.

② Check mark boxes are touch keys that show the status of selections. A box with a check mark means the function is "on" (enabled) and an unchecked box means the function is "off" (disabled). Alternate touches of a box will change the on/off status.

③ If a program step requires more than one screen to display all available settings for a program step, [▲] and [▼] arrow touch keys on the setting screens allow access to the available selections on all screens. If a selection is accepted on one of the screens by a press of the [OK] key, the display will return through the previous selection screens within the same setting step to confirm the settings. After all settings are confirmed, the [OK] key must be pushed again to advance to the next step.

④ The currently set numerical value is displayed.

⑤ Numerical values can be set by touching the [▲] and [▼] keys.

Description of setting programs

The intention of this section is to describe the key operator programs which can be set by either using the operation panel on the main printer unit or the operation panel on an optional scanner module. All description headings not enclosed in brackets apply to setting programs from the panel on the main unit and those enclosed in brackets { } apply to setting programs from the panel on the scanner unit.
The programs set from either panel will have the same effect.
For additional descriptions of programs that cannot be set from the main unit but can be set when an optional scanner module is added to include copier, or copier and facsimile functions, refer to the manuals for the optional units.

■ Account control

The program "Auditing mode" is used to set the internal auditor function. The other programs of this category can be set only if the auditing mode has been enabled.

Auditing mode

When the auditing mode is enabled, up to 100 five-digit account numbers can be registered and assigned to users. An assigned account number must be entered for access to printing.

{Auditing mode}

An account number must be entered for access to the machine to enable scanning for copying, facsimile sending or network scanning.

Print per account

This program is used to display or print the total number of prints against each account number. Misfed paper is not counted.

{Total pages per account}

This program is used to display or print the total number of prints against each account number. When using the facsimile feature and network scanner feature, the original transmission count can be displayed or printed.

Reset account

This program is used to reset either all or individual audit accounts.

{Resetting account}

When using the facsimile feature and the network scanner feature, this program can be used to reset the original transmission count.

Account number control

- Account numbers must be five digits long and can be registered successively.
- Account numbers can be deleted or changed individually or all at one time.
- To change an account number, enter the account number to be changed and then enter a new account number. After an account number is changed, another account number can be selected to be changed. Changes for unregistered account numbers will not be registered.

{Account number control}

Same as for the main unit.

No print if ACC'T # invalid

If this program is set in the auditing mode, and an invalid account number is entered or no account number is entered on the computer, printing will not be done. If this program is not set, printing will be done and the number of prints will be accumulated as "OTHERS" in the print total.

{Cancel jobs if invalid accounts}

Same as for the main unit.

■ Energy save

For saving energy, two programs are provided for reducing the user's electricity bill, reducing waste of natural resources and cutting down on environmental pollution. In situations where it is impractical to use the Auto power shut-off timer, a program is provided to cancel that function.

Also a program is provided for reducing toner consumption.

Auto power shut-off timer

When a programmed length of time has elapsed without any operation after printing is complete, the printer will enter the auto power shut-off mode to save the maximum amount of energy.

The time until auto power shut-off occurs can be set to 15 minutes, 30 minutes, 60 minutes, 120 minutes or 240 minutes.

{Auto power shut-off timer}

The time until auto power shut-off occurs can be set in 1 minute increments up to 240 minutes.

NOTES

- We suggest you set the most appropriate time according to your usage pattern.
- If you use the program "Auto power shut-off" (described below) to disable the auto power shut-off mode, the time set with this program will be ignored.

Auto power shut-off

When a programmed length of time has elapsed without any operation after printing is complete, the printer enters the auto power shut-off mode to save the maximum amount of energy. If it becomes impractical to use the shut-off feature, this program can be used to disable the feature. If disabled, the auto power shut-off time setting (described above) will be ignored.

{Auto power shut-off}

Same as for the main unit.

NOTE

The auto-power shut-off function reduces the user's electricity bill, reduces waste of natural resources, and cuts down on environmental pollution. Since we would like you to fully understand the purpose of this mode, we suggest that you enable this mode.

Preheat mode

The printer will enter the preheat mode after a programmed length of time has elapsed without any operation after printing is complete. We suggest you set the most appropriate time according to your usage pattern.

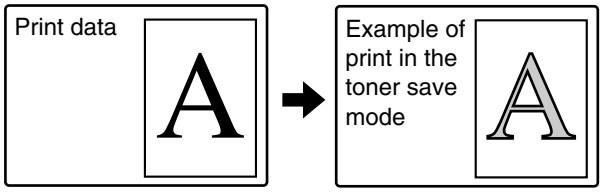
The time until the printer enters the preheat mode can be set to 15 minutes, 30 minutes, 60 minutes, 120 minutes, and 240 minutes. Also this function can be disabled.

{Preheat mode setting}

The time until the unit enters the preheat mode can be set in 1 minute increments up to 240 minutes.

Toner save

Printing in the toner save mode will reduce toner consumption. If toner save is set, black solid areas will be printed as halftone. (This setting is effective only for printing without use of the printer driver. If the printer driver is used, the printer driver setting will override the setting of this program.)



{Toner save in printer mode}

Copies or facsimile output will be made at a reduced density. Toner save can be set independently for the copier and facsimile functions.

■ Operation panel settings {Operation settings}

These programs are used to adjust the display on the operation panel.

Auto clear setting

The auto clear function will return the printer to the standby mode or the job status mode after a programmed length of time has elapsed without any operation on the operation panel. Auto clear will not function when the printer is in configuration setting mode, custom setting mode or key operator program setting mode. The auto clear time can be set to 15 seconds, 30 seconds, 60 seconds or off.

{Auto clear setting}

After a programmed length has elapsed without any operation after a copy job is complete or while detailed status information is being displayed, the auto clear function will return the screen to the copy basic screen or the job status screen. The auto clear time can be set in 10 second increments up to 240 seconds. The auto clear function can be disabled for copier functions but not for facsimile functions.

Message display time

This program is used to adjust the time that messages are displayed (for messages that automatically disappear).
The time can be set to 3 seconds, 6 seconds, 9 seconds or 12 seconds.

{Message time settings}

The time can be set in 1 second increments up to 12 seconds.

Disabling of bypass printing

This setting can be used to disable the Bypass Printing function, which allows printing of other printable print jobs to continue when a print job has been interrupted due to paper running out. (See "PAPER EMPTY in the job status display" on page 1-14)

{Disabling of bypass printings}

Same as for the main unit.

Language setting

This program is used to switch the language of messages displayed on the operation panel. The following languages can be selected.
English, French, and Spanish

{Display language settings}

Same as for the main unit.

{Keys touch sound}

This setting is used to select whether or not a sound is made when a key is touched. Normally a sound is made when a key is touched.

{Disabling of job priority operation}

Use this function to disable the ability to raise the priority of a job (page 1-14).

■ Device settings {Device control}

These programs are used to enable or disable the use of a peripheral device.

Disable duplex unit

This program is used to disable duplex printing when the duplex module malfunctions. If this program is set, only one-sided printing can be performed.

{Disabling of duplex}

Same as for the main unit.

Disable stapler unit

This program is used to disable stapling when the stapler unit of the finisher or saddle stitch finisher malfunctions.

{Disabling of a stapler}

Same as for the main unit.

Disable paper desk drawers

This program is used to disable use of the stand/3 x 500 sheet paper drawer or stand/MPD & 2000 sheet paper drawer when it malfunctions.

{Disabling of optional paper drawer}

Same as for the main unit.

Disable finisher

This program is used to disable use of the saddle stitch finisher or finisher when it malfunctions.

{Disabling of finisher}

Same as for the main unit.

Disable mail-bin stacker

This program is used to disable use of the mail-bin stacker when it malfunctions.

{Disabling of mail-bin stacker}

Same as for the main unit.

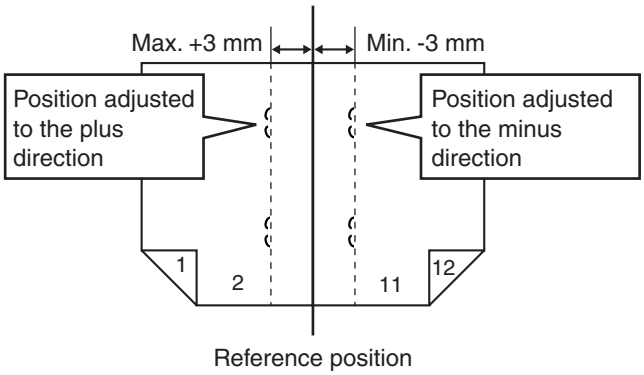
Saddle stitch adjust

This program is used to adjust the stapling position (folding position) when using the saddle stitch function of the saddle stitch finisher.

The value can be adjusted in 0.1 mm increments within ±3.0 mm from the reference position for each paper size.

{Saddle stitch position adjust}

Same as for the main unit.



High speed stacking

This program is used to have print speed priority, which is available for printing in the offset mode with the saddle stitch finisher.

When this program is on, slight decrease of stacking performance might occur.

This program is set in the factory default setting.

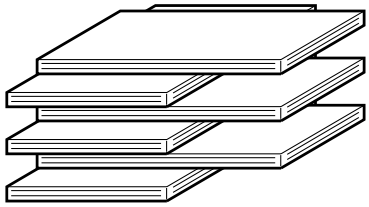
{High speed stacking}

Same as for the main unit.

Rotated output

When Rotated output is turned on, you can have the paper output orientation (A4-size paper only) of each set of copies alternate between horizontal and vertical. This function is used to sort output when neither the Finisher peripheral nor the Saddle stitch finisher peripheral are installed.

* To use this function, A4-size paper must be loaded both horizontally and vertically in the paper trays. This function works when paper is output to the upper paper output area of the laser printer, the exit tray of the Duplex module peripheral, or the top tray of the Mail-bin stacker.



The function does not work in the following cases:

- When paper is output to the Finisher peripheral or the Saddle stitch finisher.
- Printing in Group mode.
- When a letter-size original is printed on A4-size paper using the "A4/LT auto select {A4/letter size auto change}" key operator program (page 6-11).
- When "Transparency Inserts" or "Different Paper" is selected in the printer driver.
- When "Paper Source" under "Paper Selection" in the printer driver is set to any selection other than "Auto Select".
- When the printing paper size for a stored job or a job in progress has been overridden and changed to A4 size.

NOTE

When interrupt copying is performed, Rotated output does not take place to distinguish the output of regular copying from interrupt copying. Also, Rotated output cannot be used to sort output by job.

■ Print key operator programs list

This program is used to print out the list of the key operator programs.

{List print}

Key operator programs for copier, facsimile feature, and network scanner features can be printed.

■ Key operator code change

This program is used to change the key operator code.
The key operator must register a key operator code number and use the number to gain access to key operator programs. Only one key operator code number can be registered. The factory has registered the code number mentioned on page 7-11 to allow initial access to the programs. It is recommended that the key operator use the factory number for initial entry into the programs and then choose and enter another number by this program.

{Key operator code change}

Same as for the main unit.

■ Default settings

These programs are used to adjust the settings of various printer functions from the factory default settings or to cancel the settings.

Print density level

This program is used to adjust the lightness or darkness of prints. The print density level can be selected from the following.
LIGHTEST, LIGHTER, NORMAL, DARKER, DARKEST

{Print density level}

Five levels are provided for density adjustment. These are represented by numbers displayed on the touch panel. Among the displayed numbers, a smaller value indicates lighter density and a larger value indicates a darker density.

Disable notice page printing

This program is used to disable notice page printing. For a description of notice page printing, see “Notice page printing” (page 7-5).

{Prohibit notice page printing}

Same as for the main unit.

Disable test page printing

This program is used to disable test page printing. If this program is set, printer test page printing in custom settings (page 3-6) cannot be executed.

{Prohibit test page printing}

Same as for the main unit.

A4/LT auto select

If this program is set, and printing onto 8-1/2" x 11" size paper is selected but not available, the printer will automatically substitute A4 size paper in place of 8-1/2" x 11" paper if A4 paper is available.

- 8-1/2" x 11" paper cannot be automatically selected in place of A4.

{A4/letter size auto change}

Same as for the main unit.

NOTE

When 8-1/2" x 11" size is specified for a document attached to an E-mail that has been transmitted from a foreign country and A4 size paper is not installed in the printer, printing cannot be done without operator intervention. If this program is set, printing will be executed without intervention if a paper tray is loaded with A4 paper.

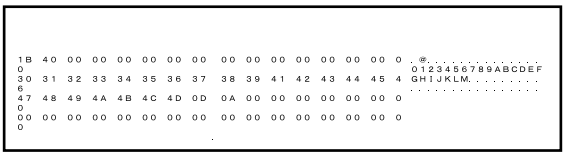
■ Interface settings

These programs are used to control data transmitted to the parallel port or network port of this printer.

Hexadecimal dump mode

This program is used to output the print data from a computer in the hexadecimal dump format with corresponding characters (ASCII). This program is used to check proper transmission of print data from the computer to the printer.

Output example of hexadecimal dump mode (A4 portrait)



{Hexadecimal dump mode}

Same as for the main unit.

PDL for parallel port

This program is used to specify a printer language to emulate when the printer is connected to a computer through a parallel port.

Setting items	Description
Auto	The printer language will switch automatically in accordance with the data from the computer.
PostScript	PostScript emulation is used to print the data from the computer. (An optional PS3 expansion kit is needed.)
PCL	PCL emulation is used to print the data from the computer.

{Parallel port emulation switching}

Same as for the main unit.

NOTE

It is recommended to set “AUTO” (default setting) unless an error due to this setting occurs frequently.

PDL for network port

This program is used to specify a printer language to emulate when the printer is connected to a computer through the network port.

The setting items are the same as those of “PDL for parallel port”.

{Network port emulation switching}

Same as for the main unit.

NOTE

It is recommended to set “AUTO” (default setting) unless an error due to this setting occurs frequently.

I/O timeout

This program is used to set the length of time to wait for an I/O to complete a job on the parallel port or the network port. If the data stream to the port does not transmit data for a length of time exceeding the timeout, the job will cancel and the next job will start processing.

{I/O timeout}

Same as for the main unit.

NOTE

The allowable range of the time is 1 to 999 seconds.

Port switching

This program is used to set the switching method of the parallel port and network port of this printer.

Setting item	Description
PER JOB	After a print job is complete, automatic port selection state will be restored.
TIMEOUT	After I/O timeout time (set with the program above) elapses, automatic port selection state will be restored.
PARALLEL OFF	Printing from the parallel port is disabled.
NETWORK OFF	Printing from the network port is disabled.

{Port switching method}

Same as for the main unit.

The item names in the table above, however, are different as follows.

PER JOB → SWITCH AT END OF JOB

TIMEOUT → SWITCH AFTER I/O TIMEOUT

PARALLEL OFF → DISABLE PARALLEL PORT

NETWORK OFF → DISABLE NETWORK PORT

■ Network settings

These programs are set when this product is used as a network printer.

After each program is set, exit the key operator program, turn off the main switch, and then turn on the main switch again after a while. The program that has been set will be effective at this time.

NOTE

For setting and modification of “Network settings”, be sure to consult with the network administrator.

IP address setting

When using this product in a network that uses the TCP/IP protocol, use this program to set the IP address (IP address, IP subnet mask, and IP gateway) of this product. The program is set to ENABLE DHCP by factory default setting, which has the IP address setting obtained automatically. When using this product in a network that uses the TCP/IP protocol, set also the program “Enable TCP/IP” below.

{IP address setting}

Same as for the main unit.

Enable TCP/IP

When using this product in a network that uses the TCP/IP protocol, set this program. Also set the IP address using the program "IP address setting" above.

{Enable TCP/IP}

Same as for the main unit.

Enable NetWare

When using this product in a network that uses the NetWare protocol, set this program.

{Enable NetWare}

Same as for the main unit.

Enable EtherTalk

When using this product in a network that uses the EtherTalk protocol, set this program.

{Enable EtherTalk}

Same as for the main unit.

Enable NetBEUI

When using this product in a network that uses the NetBEUI protocol, set this program.

{Enable NetBEUI}

Same as for the main unit.

Reset the NIC

This program is used to reset all setting items of NIC (Network Interface Card, namely Print Server Card) of this product to the factory default settings.

{Reset the NIC}

Same as for the main unit.

■ Initialize/store settings {Initialize and/or store settings}

The configuration settings (page 3-2) and the system settings of the key operator programs (page 6-11) can be stored in memory and can be recalled from memory if the settings are changed. These can also be reset to the factory default settings.

Restore factory defaults

This program is used to reset configuration settings (page 3-2), default settings and interface settings of the key operator programs (pages 6-11 and 6-12) to the factory default settings. If you wish to record the settings before resetting them, use "List Print" of custom settings (page 3-8) to print the settings before using this program.

{Restore factory defaults}

Same as for the main unit.

NOTE

After this program is set, exit the key operator program, turn off the main switch, and then turn on the main switch again after at least 3 seconds. The program will be effective at this time.

Store current configuration

Use this program to store the current configuration settings (page 3-2), default settings and interface settings of the key operator programs (pages 6-11 and 6-12) in the printer's nonvolatile memory. To recall the stored settings, use the program "Restore configuration" below.

{Store current configuration}

Same as for the main unit.

Restore configuration

Use this program to recall the configuration settings that have been stored in the printer's nonvolatile memory by the program "Store current configuration" above.

{Restore configuration}

Same as for the main unit.

NOTE

If the settings of "Enable TCP/IP", "Enable NetWare", "Enable EtherTalk" or "Enable NetBEUI" has been changed, exit the key operator program, turn off the main switch, and then turn on the main switch again after at least 3 seconds. The changes will become effective at this time.

■ Product key

Use these programs to input data required to activate the following systems.

PS3 expansion kit

This program must be used to activate a PostScript expansion kits. For the password to be entered, contact your dealer.

{PS3 expansion kit}

Same as for the main unit.

{Network scanner expansion kit}

This program must be used to activate a network scanner expansion kit. For the password to be entered, contact your dealer. This program can be used only if the machine is equipped with a scanner module.

E-mail alert and status

This program cannot be used now. This program is reserved for future customer support through a network.

{E-mail alert and status}

Same as for the main unit.

{Printer expansion kit}

This program is used to activate the printer expansion kit when using the unit as a network printer. For the password to be entered, contact your dealer.

CHAPTER 7

APPENDIX

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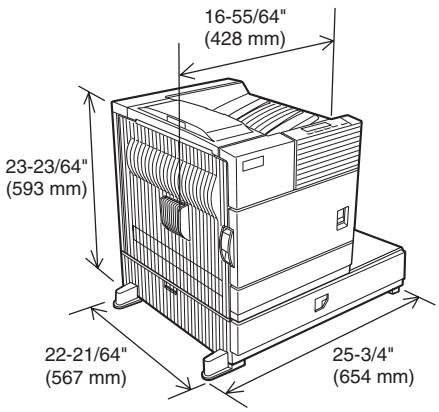
PRINTER SPECIFICATIONS

Type	Desktop (can be upgraded to console type if an optional stand is installed.)
Print system	Electrophotographic system
Exposure system	Semiconductor laser diode system
Developer system	Magnetic brush development
Paper feed system	Paper trays
Fusing system	Heat roller
CPU	64 bit RISC, 200 MHz
Memory capacity (standard)	32 MB/(64 MB for models with a multi-function controller board)
DIMM slots for additional memory	One (64 MB to 256 MB memory can be mounted.)
Page description language	PCL6, PCL5e, PS3 emulation*
Resident font	Outline font: 46 (including Line printer font) PostScript compatible font: 136* *An optional PS3 expansion kit is needed.
Parallel interface	IEEE-1284 compatible parallel interface (P1284B connector)
Network interface	10 Base T/100 Base TX (To extend this product to include network features, an optional Print Server Card is needed.)
Warm up time	Approx. 80 seconds
Continuous print speed (8-1/2" x 11" or A4 paper)	31 ppm type: 31 pages/min., 35 ppm type: 35 pages/min., 45 ppm type: 45 pages/min.
Resolution	600 x 600 dpi
Print color	Black
Printing orientation	Portrait/landscape
Power supply	USA: AC120V, 60Hz, 12A Other countries: Local voltage ± 10% (For power supply requirements, see the name plate of the main unit.)
Power consumption	Max. 1,450 W
Operating environments	Temperature: 59°F to 86°F (15°C to 30°C), Humidity: 20% to 80%

Dimensions:



Acoustic Noise Emission (measurement according to ISO7779)

		Printing mode	Standby mode
Sound power level L_{wA}		6.5 B	4.8 B
Sound pressure level L_{pA}	Bystander positions	53 dB(A)	33 dB(A)

Emission Concentration (measurement according to RAL UZ62)

Ozone	0.02 mg/m^3 or less
Dust	0.075 mg/m^3 or less
Styrene	0.07 mg/m^3 or less

Weight: Approx. 111lbs. (50kg) (including a multi purpose drawer)

List of principal printer driver functions

			When an optional PS3 expansion kit is installed		
Driver selections		PCL5e/PCL6	PS	PPD (Windows)	PPD (Macintosh)
General	Copies	1 - 999	1 - 999	1 - 999	1 - 999
	Orientation	Yes	Yes	Yes	Yes
	Duplex print	Yes	Yes	Yes	Yes
	Saddle stitch	Yes	Yes	N/A	N/A
	Binding edge	Left/top/right	Left/top/right	Long/short	Long/short
	N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
	N-up direction	Fixed	Fixed	Fixed	Selectable
	N-up border line	Yes	Yes	Yes (always)	Yes
Paper	Paper size	Yes	Yes	Yes	Yes
	Custom paper size	1 size	1 size	3 sizes*3*5	N/A
	Source selection	Yes	Yes	Yes	Yes
	Different first page	Yes	Yes	N/A	Yes
	Transparency inserts	Yes	Yes	N/A	Yes
Paper output	Output tray selection	Yes	Yes	Yes	Yes
	Mail bin	Yes	Yes	Yes	Yes
	Staple	Yes	Yes	Yes	Yes
	Offset	Yes	Yes	Yes	Yes
	Punch	Yes	Yes	Yes	Yes
Graphic	Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
	Halftone	N/A	Yes	Yes	N/A
	Graphic mode	Yes	N/A	N/A	N/A
	Smoothing	Yes	Yes	Yes	Yes
	Toner save	Yes	Yes	Yes	Yes
	Photo enhancement	Yes*8	Yes	N/A	N/A
	Negative image	N/A	Yes	Yes	Yes
	Mirror image	N/A	Horizontal/vertical	Horizontal	Horizontal/vertical
	Zoom	N/A	N/A	Yes	Yes
	Fit to page	Yes	Yes	N/A	N/A
Font	Resident font	46 fonts	136 fonts	136 fonts*6	35 fonts
	Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A
Others	Watermark*7	Yes	Yes	Yes	Yes
	Overlay	Yes	Yes	N/A	N/A
	Job retention*1	Yes	Yes	N/A	Yes
	Account control	Yes	Yes	N/A	Yes
	Custom settings	Yes	Yes	N/A	N/A
	Automatic configuration*2	Yes	Yes	N/A	Yes
	Job end notification	Yes	Yes	N/A	N/A

*1 . . . In the models without a hard disk drive, an optional hard disk drive must be installed .
*2 . . . Functions when peripheral devices are installed.
*3 . . . Not supported in the Windows NT 4.0 environment.
*4 . . . 2/4/6/9/16 is supported in the Windows 2000 environment.
*5 . . . Only one size is supported in the Windows 2000 environment.
*6 . . . Only 35 fonts are supported in the Windows NT 4.0 environment.
*7 . . . This function is limited for PPD.
*8 . . . PCL6 only

LIST OF COMBINATION OF PERIPHERAL DEVICES

The table below shows the possible system configurations. Some devices require the installation of others (Ⓑ) to be functional and some cannot be installed together (Ⓐ).

		Ⓑ B/W scanner module/DSPF	Ⓑ Scanner rack	Ⓑ Multi purpose drawer	Ⓑ Stand/3 x 500 sheet paper drawer	Ⓑ Stand/MPD & 2000 sheet	Ⓑ Duplex module/bypass tray	Ⓑ Duplex module	Ⓑ Saddle stitch finisher	Ⓑ Finisher	Ⓑ Mail-bin stacker	Ⓑ Exit tray	Ⓑ Upper exit tray extension	Ⓑ Punch unit	Ⓑ Multi-function controller board	Ⓑ Print server card	Ⓑ PS3 expansion kit	Ⓑ Network scanner expansion kit	Ⓑ Facsimile expansion kit	Ⓑ Fax memory (8 MB)	Ⓑ Power supply unit	Ⓑ Hard disk drive	Ⓑ Printer kit
	Related to scanner feature																						
Ⓐ	B/W scanner module/DSPF	—	○	×	○*1										○						○		
Ⓐ	Scanner rack	○*1	—	×	○*1										○						○		
	Related to paper feed unit																						
Ⓐ	Multi purpose drawer	×	×	—	×	×			×					×				×	×	×			
Ⓐ	Stand/3 x 500 sheet paper drawer			×	—	×															○		
Ⓐ	Stand/MPD & 2000 sheet paper drawer			×	×	—															○		
Ⓐ	Duplex module/bypass tray*2			○*1			—		×					×							○		
Ⓐ	Duplex module*2			○*1				—													○		
	Output units																						
Ⓐ	Saddle stitch finisher			×	○*1		×	○	—	×		×									○		
Ⓐ	Finisher			○*1					×	—	×			×							○		
Ⓐ	Mail-bin stacker			○*1						×	—										○		
Ⓐ	Exit tray						○*1		×			—		×									
Ⓐ	Upper exit tray extension									×	×		—										
Ⓐ	Punch unit			×	○*1		×	○	○	×		×		—							○		
	Related to extension of functions and others																						
Ⓐ	PS3 expansion kit																—						
Ⓐ	Network scanner expansion kit	○*1	○	×	○*1										○	○		—					
Ⓐ	Facsimile expansion kit	○*1	○	×	○*1										○				—				
Ⓐ	Fax memory (8 MB)	○*1	○	×	○*1										○				○	—	○		
Ⓐ	Power supply unit																				—		
Ⓐ	Hard disk drive																					—	
Ⓐ	Multi-function controller board	○*1	○	×	○*1										—								
Ⓐ	Print server card															—							
Ⓐ	Printer kit															○							—

○ = (Ⓐ) and (Ⓑ) must be installed together.

○*1 = (Ⓐ) requires installation of one of the (Ⓑ) units.

× = Cannot be installed together.

*2 If the multi purpose drawer is installed, the power supply unit is not needed.

NOTICE PAGE PRINTING

A notice page will be printed when the current print job cannot be done due to a system limitation and an explanation of the limitation is too lengthy to be shown in the message display. A notice page will describe the limitation and other possibilities to run the job.

A notice page will be printed in the following cases.

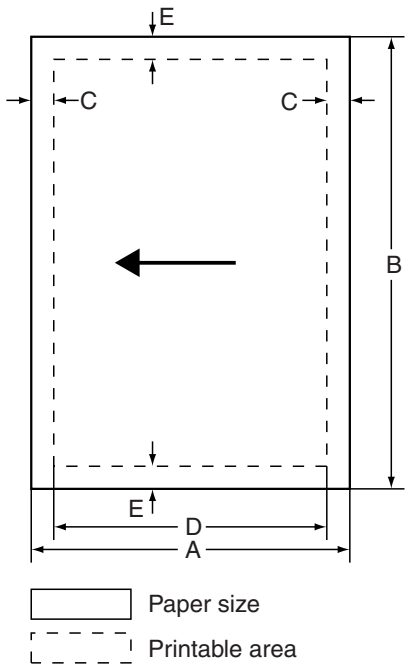
- When sufficient memory is not available to store the print data. This may happen even if the amount of data for the job is not large when the memory becomes full with data of other jobs.
- When a print job is sent to the printer and the number of print hold jobs has reached the maximum of 100 jobs.
- When different paper sizes have been selected for printing within a print job and one or more of the sizes cannot be delivered to the selected exit tray or to the stapler compiler. In these cases printed paper will be delivered partly to the specified destination (tray or compiler) and partly to another exit tray.
- When a function has been selected for printing but has been disabled by a key operator program. (Duplex module is disabled, stapler is disabled, punch is disabled, specified exit tray is disabled, etc.)
- An invalid account number is entered when the auditing mode has been set.

Disabling of notice page printing

Notice page printing can be disabled using a key operator program. See “Disable notice page printing” on page 6-11.

PRINT AREA

The print area of this product is shown below.



Dimension in mm

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10 (envelope)	105	241	4	97	4
C5 (envelope)	162	229	4	154	4
Monarch (envelope)	98	191	4	90	4
DL (envelope)	110	220	4	102	4
ISO B5 (envelope)	176	250	4	168	4

- If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

PCL symbol set

No.	symbol set
1	Roman-8
2	ISO 8859-1 Latin 1
3	PC-8
4	PC-8 Danish/Norwegian
5	PC-850
6	ISO 6 ASCII
7	Legal
8	ISO 21 German
9	ISO 17 Spanish
10	ISO 69 French
11	ISO 15 Italian
12	ISO 60 Norwegian v1
13	ISO 4 United Kingdom
14	ISO 11 Swedish :
15	PC1004 (OS/2)
16	DeskTop
17	PS Text
18	Microsoft Publishing
19	Math-8
20	PS Math

No.	symbol set
21	Pi Font
22	ISO 8859-2 Latin 2
23	ISO 8859-9 Latin 5
24	ISO 8859-10 Latin 6
25	PC-852
26	PC-775
27	PC Turkish
28	MC Text
29	Windows 3.1 Latin 1
30	Windows 3.1 Latin 2
31	Windows 3.1 Latin 5
32	Windows Baltic (not 3.1)
33	Windows 3.0 Latin 1
34	Symbol
35	Wingdings

- These symbol sets are trademarks or registered trademarks of their respective owners.

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KEY OPERATOR CODE NUMBER: FACTORY SETTING

The following is the factory setting of the Key Operator Code Number, which must be used to access the Key Operator Program.

Factory setting = 00000

This number must be entered when accessing the Key Operator Program for the first time. (See page 6-3 or 6-6.)

NOTE:
The Key Operator Code Number is an important security number allowing the Key Operator to configure the copier's functions and auditor's settings.
You should register your own code number — different from the factory setting above — immediately after your copier is installed.

★ *KEY OPERATOR*
Detach this page and store it in a safe place.

Operation manual
for printer operation and general information

SHARP®

SHARP CORPORATION

PRINTED IN FRANCE
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M300,M350,M450,P350,P450,
3500,3501,3551,
4500,4501,4551